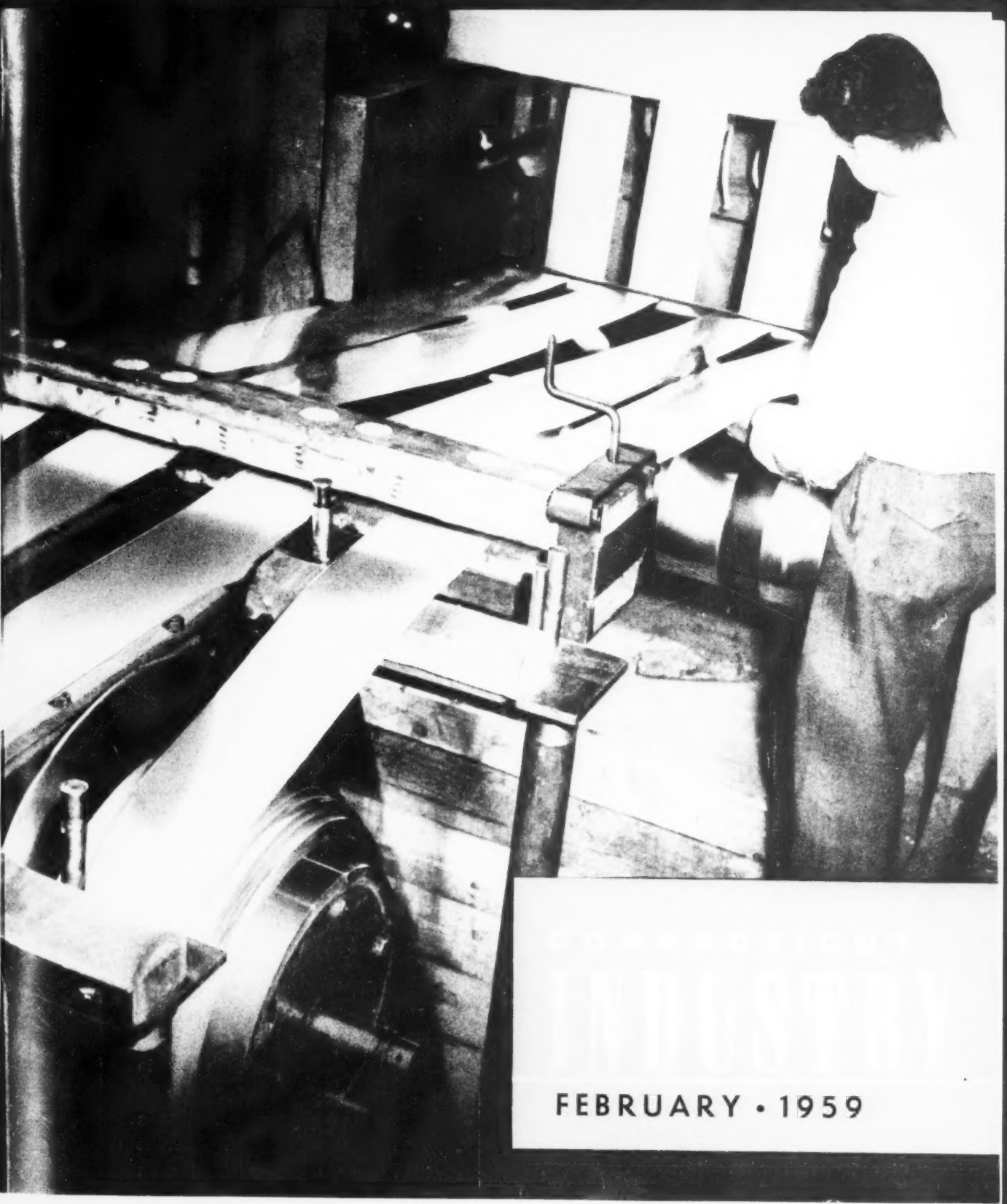

FEBRUARY • 1959

Out-of-town telephone calls get there first, get things done ...profitably

No one ever buried an out-of-town telephone call in an "in basket."

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Why not check to see if your people are making full, regular use of out-of-town telephone calls to increase profit?

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WHEN YOU CALL STATION-TO-STATION

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BRIDGEPORT to Cleveland, O.	$1.70	$1.20	30¢
NEW HAVEN to Philadelphia, Pa.	$1.00	70¢	20¢
STAMFORD to Milwaukee, Wis.	$2.10	$1.50	40¢
WATERBURY to Atlanta, Ga.	$2.25	$1.60	45¢

Add 10% Federal Excise Tax

YOU SAVE TIME

WHEN YOU DIAL YOUR OWN TOLL CALLS

Use Direct Distance Dialing, if it's available in your area.

It's the fastest, easiest way to make long distance calls.

You'll find complete instructions in the telephone directory . . . plus a list of out-of-state places that can be dialed direct.

THE SOUTHERN NEW ENGLAND TELEPHONE COMPANY

CONNECTICUT
INDUSTRY

FEBRUARY • 1959
VOLUME 37 NUMBER 2

THIS MONTH'S cover photo shows metal strip emerging from annealing furnace at Waterbury Rolling Mills. Precision annealing assures fine, uniform grain structures which increases flexibility and fatigue life of the metal.

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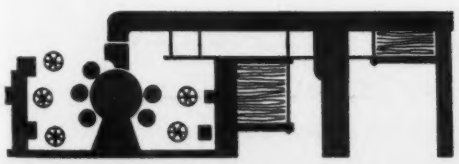
If your catalog, house organ and/or advertising materials can profit from the tremendous added appeal of color we will welcome an opportunity to discuss the possibilities with you.



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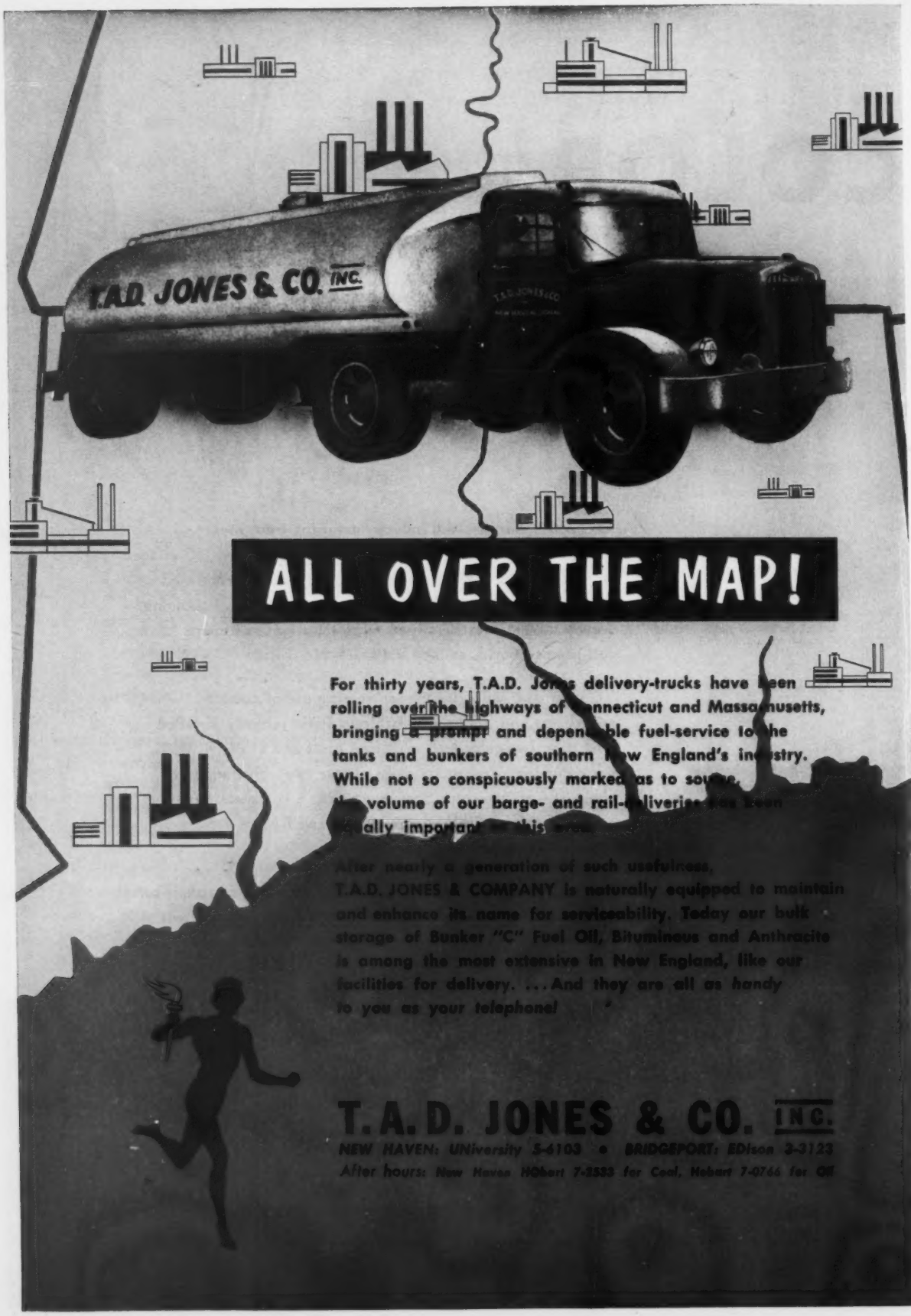
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Politicians Are What We Make Them

By FRED G. CLARK and RICHARD STANTON RIMANOCZY
American Economic Foundation, New York.

♦ THE above headline is an economic fact of life because politics and economics are Siamese twins; what happens in Washington affects everybody's pocketbook.

In a free society such as ours, where every man's vote counts just as much as any other man's vote, the great majority of office seekers will be for the things that most of the voters are for.

This was clearly shown by the recent election in which it was difficult to find any important difference between most of the candidates of the two parties.

If we, the people, think that government can give us something for nothing, few political candidates will take the risk of contradicting us.

If the things we want government to do for us result in inflation, high cost of living, and cheapening of our dollars, we cannot blame our elected representatives: *they are only doing what we indicated that we wanted done when we voted for them.*

Deep down inside most of us "know better" than to vote for some of the measures we have been supporting, but our selfish interests get the best of us.

We *know* it is not right to avoid taxation by piling up a higher and higher national debt which future generations must pay, *but we like it.*

The farmers *know* that it is not right to get paid for not raising crops, or for raising high-priced surplus crops to sell to the government, *but they like it.*

People in average income brackets, *know* that it is not right to "soak the rich" as much as 91% of their income, *but they like it.*

And so goes human nature.

But there is a destiny that shapes our economic ends, roughhew them though we may.

We always end up paying for what we get.

For example, when we apparently duck taxes by increasing the inflationary debt, we are taxed just the same because the inflation decreases the value of our money and, on top of that, we have to pay a whopping interest charge.

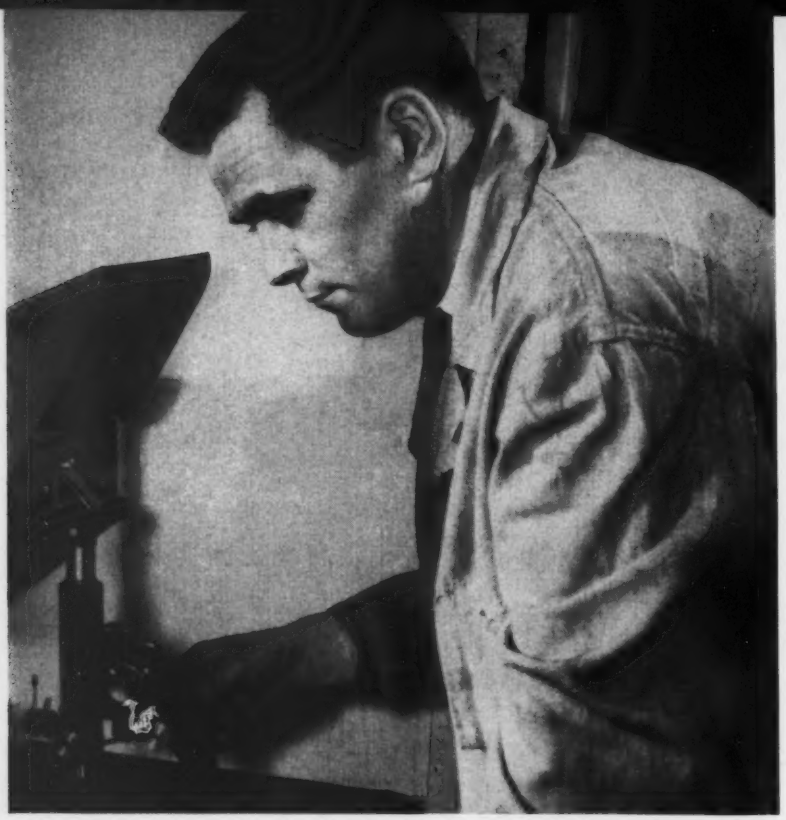
The farmer votes for and gets his unearned reward, but he must then face the higher prices of things he must buy —higher prices caused by cost-of-living wage increases necessitated by the higher prices of food.

It is popular to "soak the rich" with astronomical tax rates, but this only increases the taxes that must be collected from the lower brackets, because the rich (who are not dopes) simply refuse to make as much taxable income as their ability permits.

The trouble is that in our modern, highly complicated economic life, these causes and results are not easy to observe.

But until we *do* observe them, and until we *do* realize that in our economic life "something for nothing" is a sucker proposition, we will never have the intelligence to support the type of candidates that will give us the kind of government that is best for us.

We need not worry about the politicians—they will change just as fast as we change—and most of them already "know better" and would sleep much more comfortably if they *could* change without getting voted out of office.



Modern instrumentation and laboratory maintains quality control at every stage in production of Waterbury Rolling Mills alloys.

Specialists In Metal

■ THE history of Connecticut industrial development is filled with companies that are today making entirely different products than they were originally founded to produce. A striking exception to this common situation is the Waterbury Rolling Mills, Inc.

The basic products of this company are the same today as when it was founded on April 24th, in the Spring of 1906. From its very inception to the present day, Waterbury Rolling Mills has functioned as a specialist in the production of nickel silver, phosphor bronze and special copper base alloys in sheet and strip form. Changing technology and techniques of production have, of course, changed and improved the product character, but the firm's concentration on these basic metals has been constant. As a result, when you use your door key to let yourself in, or pick up your fork at dinner tonight, or use an electrical appliance, there is a good possibility that you are benefiting from a product of Waterbury Rolling Mills.

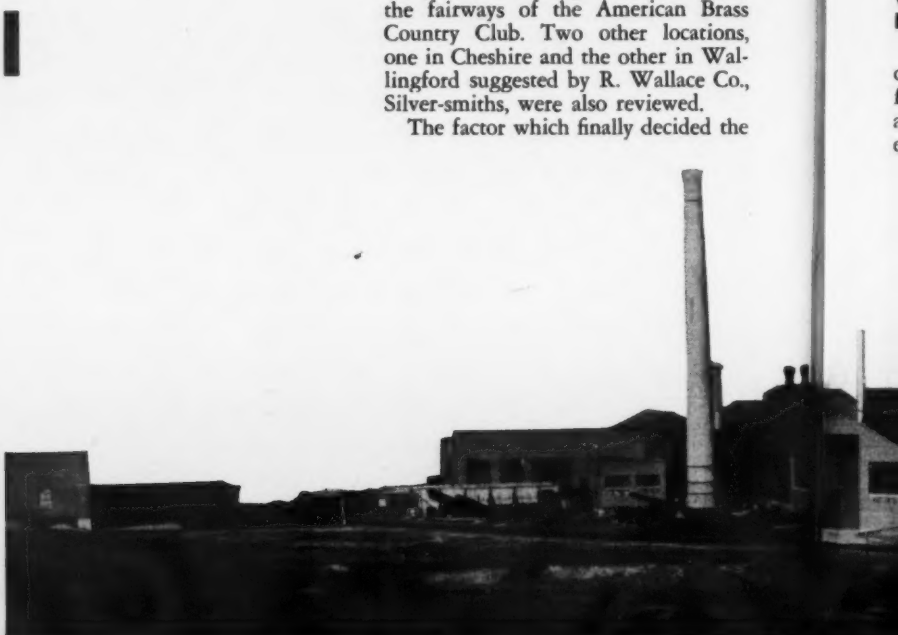
Early History—An Amazing Gift

The company's original officers were A. H. Wells, President, R. D. Somers, Vice President, Fred B. Beardsley, Secretary and Frank P. Welton, Treasurer.

The only surviving member of this founding group is Mr. Robert D. Somers, who is still active in the affairs of the company. He recently retired from the position of Chairman of the Board, but continues to act in an advisory capacity as Chairman of the Board Emeritus.

Prior to the actual establishment of the company, various sites were considered including one on Hop Brook in Naugatuck, where golfers now enjoy the fairways of the American Brass Country Club. Two other locations, one in Cheshire and the other in Wallingford suggested by R. Wallace Co., Silver-smiths, were also reviewed.

The factor which finally decided the



View of Waterbury Rolling Mills plant. Main office building can be seen toward the right hand side of photo.

matter was a real estate promotion which, in the light of present day land values, was truly fantastic. A Mr. R. K. Brown, a Waterbury industrialist, gave the new company nine acres of a large tract which he owned, with no strings attached, simply to promote the development of industrial sites in this area. The foresight of this man is evidenced today by the many plants now located on what was once "Brown's Meadows".

Original Equipment— Early Expansion

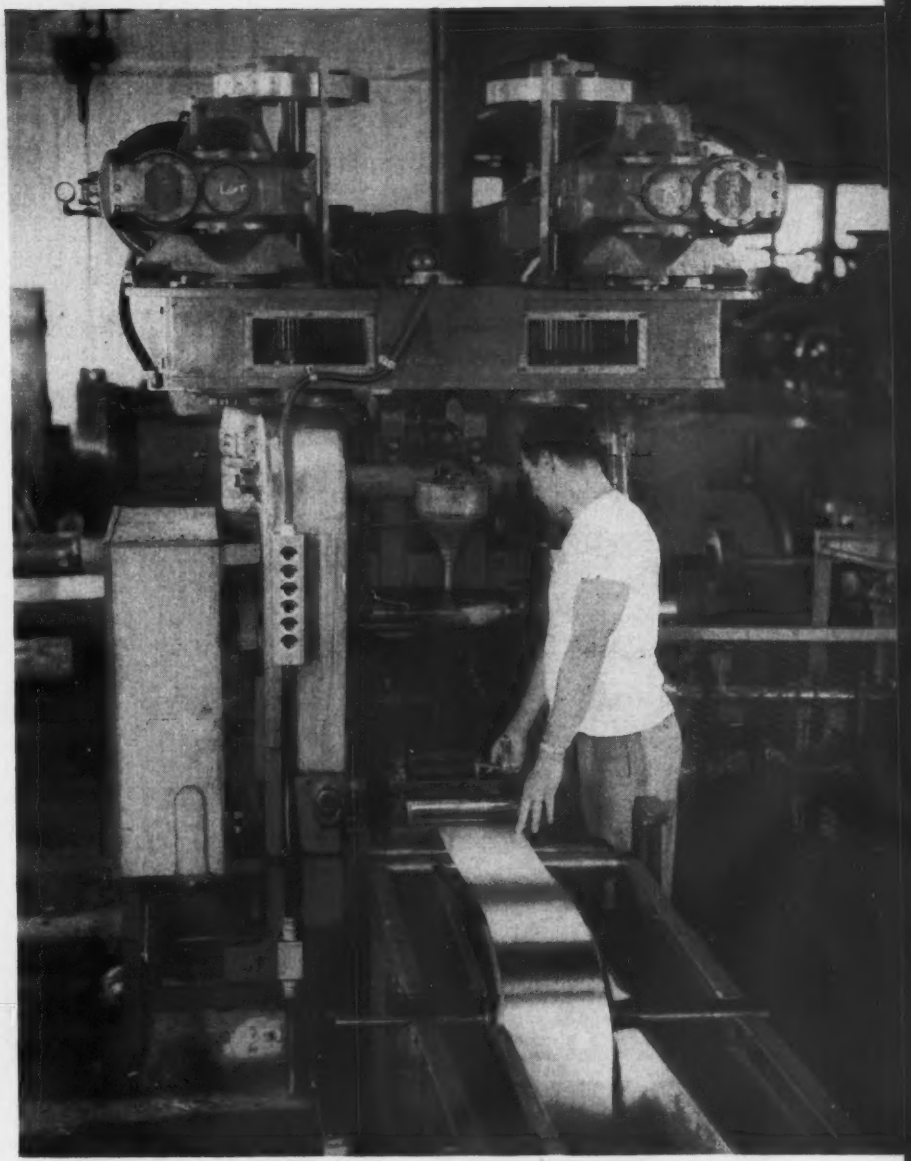
The mill was constructed, and on April 7, 1907, the company began production operations under the direction of Mr. R. D. Somers as Factory Superintendent, Frank P. Welton, Superintendent of Casting and Abel Kenworthy, Master Mechanic. As Mr. Somers expressed it in a recent interview, "We made a pretty good team because each had plenty of experience in his particular job". At the time Mr. Somers had approximately 20 years of experience in the brass industry, having started to work in 1885, a the age of 15 for Benedict and Burnham—a firm which later became part of The American Brass Co.

The original mill operated with three pairs of rolls driven by a 500 horsepower steam engine, two wood-fired muffles and twenty coal-pit fires. This equipment was housed in a 64′ x 50′ steel-framed wooden structure exclusive of the casting shop. At the time, 50 men were employed.

Expansion started during the following year with an increase in floor space. This was followed by the addition of further rolling and annealing facilities.

World War I Spurs Further Growth

During the First World War, the company supplied material for shells, fuses, canteens, surgical instruments and other items necessary for the war effort. The increased demand for cop-



Rolling is not left to the human hand and eye. Modern electronic equipment automatically controls metal thickness within close tolerances.

per-base alloys during this period required a substantial addition to he company's facilities.

A Citation From the U. S. Government

It was during this wartime period that Mr. R. D. Somers developed a new copper-nickel-zinc alloy which was named Somers-Cupro. This metal had superior physical properties particularly advantageous for bullet jackets. In recognition of this contribution to the war effort, the federal government awarded Mr. Somers a citation and a flag.

After World War I, the company's facilities continued to be improved. The steam engine was replaced by an electric motor; the wood-fired muffles were converted to oil, and in 1939, the Casting Shop underwent a major change when electric induction furnaces replaced the pit fires.

War and Postwar

Defense mobilization and war production demands made by World War II quickly diverted the company's production of nickel silver, phosphor bronze and other alloys to uses essential to the war effort. Unprecedented production tonnage rolled out as the company helped fill the need for its vital metal products.

During the hectic period immediately following the end of the war, the company realized that customers' postwar plans were going to demand new, more stringent standards of manufacture throughout the industry. With this idea in mind, an expansion program was planned which put special emphasis on top quality. To further this aim, the company installed new annealing and rolling equipment which gave closer gauge control, a better finish and superior workability to Waterbury Rolling Mills' products.

The expansion and continuing modernization of the company's production and quality control facilities is today steadily moving forward. In fact, a new four high mill for Waterbury Rolling Mills is being completed at present by a neighboring company, The Waterbury Farrell Foundry & Machine Co., Division of Textron Inc.

The officers of Waterbury Rolling Mills, Inc. at the present are Gordon W. Somers, President, Frederick B. Beardsley, Jr., Secretary & Treasurer.

(Continued on page 34)

Robert D. Somers, one of the founders of Waterbury Rolling Mills, who recently retired as chairman of the board.

Finishing and inspection department checks each coil, strip and sheet individually for surface defects.

Waterbury double checks the accuracy of composition before casting. The exact amount of each ingredient for a single charge is weighed separately and then all ingredients are weighed again together.

Civic and industry leaders of the Greater New Haven area inspect the new addition to factory facilities of the Connecticut Hard Rubber Co. prior to dedication of the building. Congratulating John A. Moffitt, president and founder of the company, is Mayor Richard C. Lee, third from left. In the picture, left to right, are: Merritt V. Vanderbilt, president of the Greist Manufacturing Co., Westville, and chairman of the Citizens Action Commission; Gerald D. Hotchkiss, president of the New Haven Chamber of Commerce; Mayor Lee, Mr. Moffitt, L. J. Horton, district manager, American Airlines; James Richardson of the New York office of Boeing Aircraft, and Coy Reid, first vice president of the First New Haven National Bank.

New Plant Dedicated at Connecticut Hard Rubber

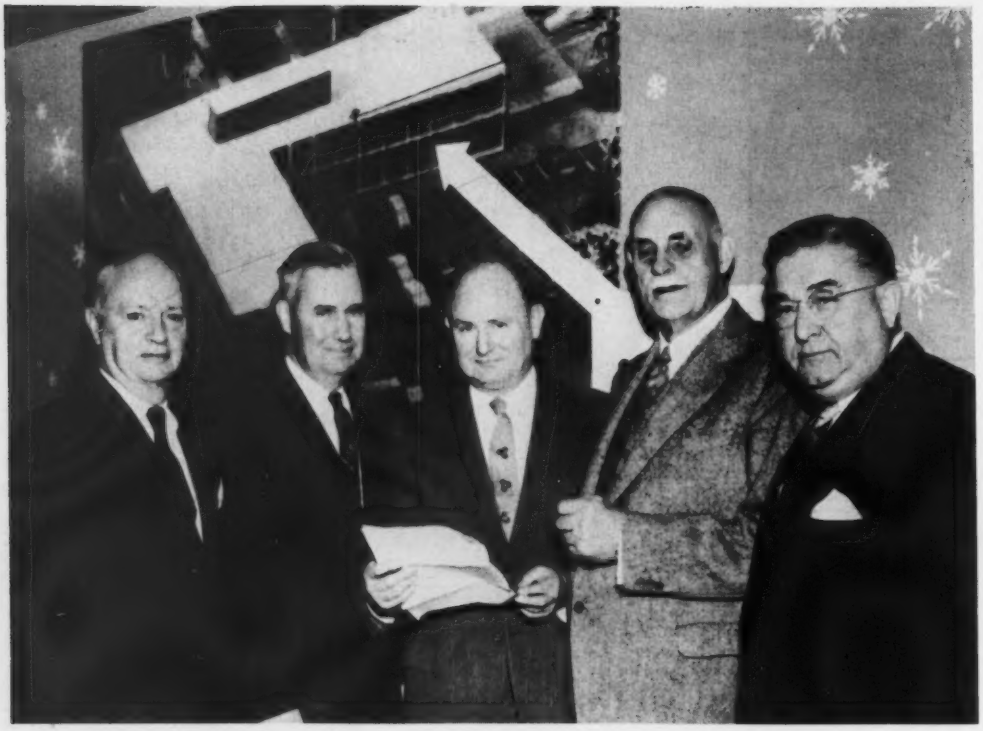
♦ OFFICIALS of the Connecticut Hard Rubber Co. and civic leaders attended dedication ceremonies recently marking the opening of an extension to the company's plant at 407 East Street, New Haven. The building addition, which adds nearly 50% to the company's production facilities, is the first phase of an extensive expansion program which the company hopes to complete within the next few years.

Among the local industry and civic leaders welcomed to the ceremonies by John A. Moffitt, founder and president of the company, were: Mayor Richard C. Lee, Merritt D. Vanderbilt, president, The Greist Manufacturing Company, and vice chairman of The Citizens Action Commission; J. Coy Reid, first vice president, The First New Haven National Bank; Gerald G. Hotchkiss, vice president, Minor Read and Tullock, and president, New Haven Chamber of Commerce; Lucius S. Rowe, president, The Southern New England Telephone Company and chairman, The Citizens Action Commission; Edward J. Logue, development administrator, City of New Haven; James Richardson, The Boeing Airplane Company, and John J. Horton, district sales manager, American Airlines.

The company is a pioneer in the fabrication of silicone rubber, a material widely used in the aircraft industry because of its ability to resist extremes of temperature without change in its essential properties. As one of the largest fabricators of this material, Connecticut Hard Rubber Co. manufactures major seals for Boeing 707 Jet Transports which the American Airlines put into domestic service in January.

In his remarks at the dedication ceremonies Mayor Lee noted the interesting parallel between the discovery of the rubber vulcanization process in New Haven and the development of the silicone rubber seals. "Vulcanization of the rubber tire was most essential to the automobile industry," the Mayor said, "while the products of C.H.R. are equally essential for the superspeed aircraft of today and tomorrow."

Mayor Lee congratulated the company on the great progress made since it began operations in a small shop on State Street 38 years ago and for its ability to keep pace with the growth of scientific research in its field and the continual expansion of the aircraft industry.



In photo taken at news breakfast are, left to right, Robert E. Carroll, chairman of the University Founders Fund, manufacturers division; Alan S. Cook, vice president and general manager of Royal McBee's Hartford plant; Charles B. Cook, manager, Roytype plant of Royal McBee; Alfred C. Fuller, chairman, University Founders and chairman of the board, Fuller Brush Company; and Wilbur C. Stauble, chairman of the University's industry and commerce division and president of Holo-Krome Screw Corp. and Veeder-Root, Inc. Alan and Charles B. Cook are sons of the late Charles B. Cook, whose memory is being perpetuated by Royal McBee's gift. Arrow in photo shows wing of building to be financed by Royal.

Royal McBee Makes Memorial Contribution to University

■ THE first memorial contribution to the University of Hartford's development fund was announced at a news breakfast, December 15, at the Royal McBee Corporation plant in Hartford by Alan S. Cook, vice president and general manager. The memorial given in honor of the late Charles B. Cook, chief executive of the Hartford plant for 34 years, is in the form of a gift of funds sufficient to underwrite construction and equipment of a secretarial science laboratory in the school's proposed business administration building, Mr. Cook said.

Commenting on some of the reasons for Royal McBee's gift, Vice President Cook said, "We have such confidence in the University that we have given financial support to several hundred of our employees who have wished to continue their education in its schools. Some 80 students are Royal McBee employees at the present time. We see every day that the pursuit of academic training at the University enhances the qualifications of these Royal McBee employees as administrators, engineers, teachers and in performing other skills so vital to an industrial organization.

"At the same time, we recognize the significant value of this same educational process when our employees assume their civic responsibilities in the greater Hartford community."

Although unable to be present at the news breakfast, Philip M. Zenner, president of Royal McBee, said in a written statement, "Today's gift to the University of Hartford should benefit all Connecticut since University authorities tell me that two-thirds of the student enrollment is outside of Hartford. As a prime industrial state, Connecticut needs institutions such as the University of Hartford where the technical skills as well as humanities may be pursued."

In accepting the gift, Robert E. Carroll, chairman of the University's Founder's Fund, manufacturing division, said, "We hope this will be the first of many memorials to outstanding Connecticut citizens. In this way, the name of an individual or organization lives forever in continued service."

Charles B. Cook, whose memory will be perpetuated by the gift, was born in England, moving to the United States at age 17. In 1907 he joined the Royal Typewriter Company as assistant manager of the company's first factory in Brooklyn, New York. He came to Hartford when the plant was moved there in 1908 and three years later was made factory manager. In 1913 he was elected vice president in charge of production and a director

(Continued on page 31)

Awards Dinner Honors Twenty-one Apprentices

■ AN Awards Dinner at the Colonial Inn, Hamden, November 17, 1958, marked the climax of the Third Annual Metal Trades Competition sponsored by the Central Connecticut Tool and Die Association, Southern Connecticut Tool and Die Association, Manufacturers Association of Connecticut, State Department of Education (Division of Vocational Education), U. S. Department of Labor (Bureau of Apprenticeship) and the Connecticut Chapter of the American Society of Training Directors. Approximately seventy-five persons were in attendance including the six outstanding apprentices who received top prizes, fifteen additional finalists, representatives of the employing companies, sponsoring organizations and wives and friends of the honored contestants.

John Dewhurst, president of the Arrow Tool Company, and chairman of the Contest Committee, acted as toastmaster, introducing special guests and speakers. Those who spoke briefly were: Arthur Gleason, president, Southern Connecticut Tool and Die Association; John Dewhurst, speaking as chairman of the National Apprentice Training Committee, National Tool and Die Manufacturers Association; Leslie M. Bingham, secretary of the Manufacturers Association of Connecticut, and A. L. Knapp, vice president of Pratt & Whitney Co., Inc., West Hartford.

Dr. William J. Sanders, State Commissioner of Education, was the featured speaker. His address, entitled "Education For a Purpose," stressed the value of specialized apprentice training in our present technological age, placing such training on a par with collegiate training in other branches of learning. He observed that apprentices make up their minds what they wish to pursue as a lifetime occupation and thereafter take "education for a purpose," whereas many who pursue college courses frequently have no clear cut idea as to what vocation they wish to follow until their last year in college, or even until they have had a few years of general business experience following graduation.

Prior to the presentation of the awards by Mr. Knapp and the certificates by Dr. Sanders, Mr. Knapp handed out an entertaining mixture of sage advice, commendation and humor which was applicable not only to the prize winning apprentices, but also to many other guests.

The six outstanding apprentices of 1958 who received awards, left to right, Edward J. Cremin, Bassick Co.; Joseph M. Fontanella, New Departure Division, General Motors Corp.; Benedict J. Perron, Plainville Special Tool Co.; Walter Carrano, Sargent and Co.; Donald Vail, Royal McBee Corp.; Andrew H. Deziel, Eyelet Specialty Div., International Silver Co. Dr. Sanders (right), presenting award certificates.

The names of the six outstanding apprentices who received the top prize of a Starrett Indicator and an award certificate were: Edward J. Cremin, Bassick Co.; Joseph M. Fontanella, New Departure Division, General Motors Corp.; Benedict J. Perron, Plainville Special Tool Co. Walter Carrano, Sargent and Co.; Donald Vail, Royal McBee Corp.; Andrew H. Deziel, Eyelet Specialty Div., International Silver Co.

Both the outstanding apprentices and the other fifteen finalists received copies of the ASTE Handbook. The top six of the last fifteen finalists also received the book entitled "Holes, Contours and Surfaces," contributed by the Moore Special Tool Co. of Bridgeport. Pratt & Whitney Co., Inc., West Hartford, donated the six Starrett Indicators and the American Society of Tool Engineers contributed the ASTE Handbook given to the entire twenty-one finalists. The fifteen finalists were: Kenneth G. Britton, Heli-Coil Corporation; Raymond Carlson, Fafnir Bearing Company; Robert P. Deshaies, Elmwood Tool and Machine Company; Joseph S. Dudzinski, Elmwood Tool and Machine Company; August T. Giacopini, New Departure Division, G.M.C.; James W. Gibson, Pratt & Whitney Co., Inc.; Donald H. Liss, Fafnir Bearing Company; Joseph F. Manyon, Jr., Pratt & Whitney Co., Inc.; Matthew Mogielnicki, Stanley Works; Robert G. Monaghan, Eyelet Specialty Div., International Silver Co.; Robert Nelson, Pratt & Whitney Co., Inc.; Joseph A. Sandulli, Highland Manufacturing Company; Joseph E. Sweeney, Pratt & Whitney Co., Inc.; Roger J. Traversa, New Departure Division, G.M.C., and Robert Wolusiuk, Arrow Tool Co.

Purpose and Plan

The purpose of this year's contest is the same as in previous years—a purpose that may be summed up as follows:

"To give recognition to outstanding apprentices and to companies conducting effective training programs; to alert industry to the need for training to meet present skill shortages and

(Continued on page 30)

Space Age Formula

By FAYETTE LEISTER, Engineering Vice President
The Fafnir Bearing Company

EDITOR'S NOTE. This story, outlining the role of research and development at Fafnir, is typical of the intensified search now being made by many manufacturers in Connecticut and by thousands in the country, in an all-out effort to make yesterday's seemingly impossible scientific concepts come true today. It stresses the critical importance of attaining perfection in little things if the big concept is to be reached. If little things are important in the creation of rockets, missiles, supersonic planes and numerous other mechanical creations, they are no less important in the creation of a harmonious work atmosphere that will provide enough inspiration to make perspiring efforts toward perfection seem worthwhile.

■ IN the days of the Little Red Schoolhouse the three R's were popularly considered the backbone of most progress. In today's jet-nuclear-space era we have a new catchword that symbolizes the tempo of the age. Today's formula is R & D—Research and Development.

Newspapers and magazines refer constantly to Research and Development. New products stream from the laboratories; old products are up-dated by employing new materials, new processing or new designs. Nowadays R & D is the bloodstream of progress.

Nowhere is this truer than in the bearings industry. The exacting nature of many applications today, however, demands something more—unfailing performance. To R & D we are compelled to add another R for Reliability.

Mousetraps—New Style

"Build a better mousetrap," the saying goes, "and the world will beat a path to your door." Once it was a simple matter for a customer to find the path and acquire his mousetrap. Today there is often heavy traffic both ways as buyer and seller with their technicians strive through R & D to build precisely the right mousetrap. For today's mousetrap may be a supersonic aircraft, a radar-guided missile or a space vehicle.

Fafnir has always made its mousetrap (or ball bearings) from high carbon, chrome steel of the best quality obtainable. This steel is a highly developed, electric furnace, air melted material. Much R & D has been lavished on it to produce a "sterling" quality in steel, that is "bearing quality." This term, when applied to steel used for other purposes, denotes the cleanest and most uniform steel available. "Bearing quality" provides great endurance plus consistency in the fabrication and heat treatment of bearings for normal use.

This quality has resulted from years of painstaking Research and Development between bearing metallurgists and the steel mills. Our metallurgists are at the mills continually watching the preparation of raw material for our plant.

Bearings made from this basic material have proved highly satisfactory. They render long service in countless applications from jet engines to sewing machines. They are being used in increasing quantities in existing fields and in new fields just opening up.

One example in a familiar field will illustrate my point. In the textile field new ideas have produced completely new machine designs. An outstanding development is a new spinning frame which will increase production of a stronger and better yarn. Due to prelubricated ball bearings, cleaner working conditions will exist and considerable maintenance will be eliminated.

R & D Problems of Today

One customer spent five years and a million dollars on research, development and tooling for the new machine. Our engineers worked two years on the required bearing design, and we are now enjoying our first production orders. This frame uses more than 600 ball bearings.

Another device under development is a truck retarder. This will make the braking of large trucks much safer and prevent them from running away on down hill grades.

With other customers we are working on numerous airplane, accessory and engine units. Our new line of miniature instrument bearings is being used extensively in fire control and navigational apparatus. In these applications conditions of load, temperature, etc. are not extreme. They are examples of what we call normal use; they require R & D in design, materials and processes. I cite them to contrast them with what we see in the future.

An Unconventional New Language

In our plant today many unfamiliar terms are heard, words far removed from the language of conventional applications. Terms like Stellite, Kentanium, Pyroceram, Cast Cobalt, Aluminum Oxide, Cobenium and Teflon are common. These are some of the new materials being researched and developed into the bearings of the future. Eventually they will take their place beside the older, long-used basic materials.

Why these new substances? For one thing the planes, missiles and engines of the space age require new properties in bearings, attributes not found in "normal" materials. They also demand something else, a Plus in performance, namely Reliability.

(Continued on page 47)

Are We Pricing Ourselves Out of World Markets?

By ERNEST R. BREECH, Chairman of the Board
Ford Motor Company, Detroit, Michigan

ERNEST R. BREECH

Mr. Breech, a leading American industrialist, who has just returned from Europe, sees American industry seriously challenged by Europe's modern plants and methods, created largely by American money and management know-how; by trade barriers abroad and inflationary wage increases at home. Unless prompt action is taken now "to set new course, to stop the inflationary trend, to hold our own markets, and in due course to rebuild our dwindling export markets" he sees an accelerated flight of American capital to build plants abroad, further deterioration of our export markets and a shrinking domestic market—all leading to increased unemployment and a lowering of our standard of living.

■ I HAVE just returned from a brief six weeks' tour of Europe, during which I tried to find out all I could about developments in our own Ford interests and in the European business scene. Never again will I let four years elapse between trips. As any of you who have been abroad recently can attest, things are happening so unbelievably fast that the old Europe is hardly recognizable.

There is tremendous new strength and growth in the European economy. More countries are enjoying greater national solvency than in decades. There is substantially higher employment everywhere. Living standards are climbing sharply, a great single mass market is developing and European industry is furiously mobilizing to meet it.

Since 1950, Europe's economy, and particularly its industry, has been overtaking us at an accelerating pace. In the period 1950 through 1957, for example, Europe's Gross National Product increased 88 per cent compared to our 49 per cent.

Europe Overtaking American Production

As a manufacturer of automobiles, I was most impressed by the really striking improvement throughout Europe in the design, manufacturing and merchandising of automobiles and consumer durable goods. They have read some pages from our book, and it begins to look as if maybe they have been learning almost too well! Europeans have a great awareness today of the economies of scale, and they are fast integrating much of their heavy industry. Scarcely a day passes that you do not hear of new mergers new joining of once small, high-cost companies into bigger and more viable units.

You find single automobile plants producing as many as 2,500 engines and 2,000 or more bodies daily—levels of production that compare favorably with operations here in the United States.

Moreover, these countries are fast adopting modern managerial organization and practices. They are accumulating capital and spending it freely on vastly improved plant and equipment. The old ties of tradition, the old habits of high-cost, low-volume cartelized production and pricing have largely gone by the board. They are innovating at a tremendous pace and important new developments and processes appear every day in mining and steel production and manufacturing.

As a result of these developments, according to our own projection for the period of 1957-1965, Western Europe's Gross National Product will increase from $226 billion to nearly $300 billion; steel, from 96 million to 130 million short tons—that exceeds our own 1957 production; coal, from 544 million to 575 million tons; and electricity, from 418 billion to 650 billion kilowatt hours—almost equaling our own domestic production by that time. Production of cars and commercial vehicles will increase from about 4¼-million units this year to 5½-million or more in 1965. In 1958 alone Europe produced about 3,500,000 passenger cars, compared to our estimated 4,300,000, and 750,000 commercial vehicles compared to our 800,000.

Time For Realism In Our Thinking

In short, Western Europe seems to be riding the private enterprise road out of the woods. And the pickings for communist subversion look very slim. I think all of us have reason for both pride and satisfaction in this. Europe's recovery has been a major goal of this country. That job appears to be just about done. It has been done not only by government aid, but with substantial help from American business. We have literally opened our box of industrial secrets and turned it inside out for our European friends.

Proud as we may be of the results, we must also be realistic and admit that the rate of Europe's progress poses new problems for us. Traditionally, of course, Europe's wage scales have been substantially lower than ours. In cer-

Excerpts from an address delivered by Mr. Breech at the annual Pittsburgh Chamber of Commerce Dinner, Pittsburgh, Pa., on December 1, 1958.

tain occupations, the differential is considerable. For example, the cost per hour for purchasing automotive tools and dies from independent producers in the Detroit area is $7.90 per hour, as compared to $3 per hour in England, as low as $2.38 per hour in France and $1.60 per hour in Milan, Italy. The current hourly base rate for a Ford assembly line worker in the auto industry here is $2.44, exclusive of fringe benefits (which add, roughly, another $.50 to $.60 per hour here) compared with $1.05 in the United Kingdom and $.69 in Cologne, Germany.

In the steel industry, Mr. Roger Blough reports a similar picture, with Ruhr steel workers earning a weekly wage of somewhat less than one-third that of their American counterparts. And in the case of another booming economy, aggressively matching the best we have to offer in manufacturing methods and equipment—I refer to Japan—industrial wages run roughly 14 per cent of comparable American rates.

Traditionally, American industry has been able to meet and beat wage competition because of its greater capital investment, its superior plant, equipment, managerial methods and economies of scale.

We have now largely lost this advantage, particularly in industrial production. Given the developments I have described in the European economy, the increasing capital investment, the improvements in European manufacturing methods and machinery, the achievement of production volumes rapidly approaching our own, the wage differential alone will become increasingly significant to American manufacturing industries.

It is likely, of course, that Europe's wage scales will increase in the years ahead. It is unrealistic, however, to think that in the next decade their wages will catch up with American wage costs.

Labor Aids In Europe

As a result of stern self-discipline, many countries in Europe have achieved balanced budgets and in certain instances have had one or more tax cuts. No small contribution has been made by wise and statesmanlike labor leaders and workers in England, Germany and other countries, who repeatedly refused to press for wage increases that they felt their countries could ill afford.

We, by contrast, seem to have been on a continuing spending spree. Industries have been pushed into excessive and repeated wage increases that have steadily widened the cost gap between ourselves and Europe, and cut sharply into our former advantage in productivity.

One of our foremost national authorities on international economics, Mr. John J. McCloy, recently had this to say:

"We have to face the fact that in many lines we are pricing ourselves right out of the world market. It is up to us to make clear to all that we have to keep prices and costs down. We have to make better products and we have to work longer and harder to make them.

". . . a disconcertingly large number of people in this world . . . are working harder and they are rapidly achieving a competitive know-how . . . we are (also) all aware of the tremendous strides Russia has made in industrial development. We no longer stand out as the single great supplier of goods that we were in the early postwar period."

I would add the thought that the industrial development of Red China also is proceeding apace. Thus, in terms of the Cold War, we are confronted in the markets of the world with two great potential trading powers, seeking to draw the vast underdeveloped areas into their orbit, and unencumbered by the problems of wage and price inflation that are now pricing us out of world markets.

Three Ways To Meet The Challenge

How is America going to face the challenge of swift industrial development abroad—the combination of fast growing productivity and efficiency with low wage rates that threatens our competitive position not only in world markets, but also in our own domestic market?

It seems to me there are three possible approaches. We can try a return to a high tariff, protectionist trade policy. We can accelerate the movement of American production abroad to take advantage of lower wage rates. Or we can make the necessary effort to maintain our competitive position both at home and abroad. Let's examine each of those points briefly.

First, should we fall back on trade restrictions? To begin with, our postwar foreign policy has had two related objectives. In the short range, we have tried to follow an economic and trade policy that would strengthen the war-shattered economies of friendly countries and enable them to resist communist subversion. At present it appears that we have succeeded, particularly in Europe. In the long range, we have worked toward the vision of rich new market areas in the world in which United States industry might participate fully.

A return to a more restrictive trade policy would, of course, have severe international repercussions. It would bring sharp reprisals, tending to seal us off from growing markets throughout the world. The effects of reprisals on the cost of imported raw materials, on which we increasingly depend, also could be severe. The long-term effect would be to contract the scope of our total economic activity, to throttle our growth and to weaken our leadership and influence in the world.

Furthermore, a protectionist policy would deny the American consumer and American industry the benefits of progressively lower cost and more efficient production, which are the normal outgrowth of competition from abroad, and would ultimately result in lower world trade levels.

I am sure that you will agree that, rather than seeking to restrict trade, we should be doing the things that will enable us to compete—to swim strongly in a stream of expanding world trade.

If America's cost disadvantage continues to increase, however, it seems to me that we must anticipate an increasing flight of American capital and much more sourcing of parts and products abroad. A trend in this direction is already evident. American manufacturers of tractors and farm implements, as well as of typewriters, office machines, cameras and optical instruments—particularly goods having a high labor content—are increasingly sourcing and manufacturing in Europe, Latin America and Japan for sale in the American market. I suggest that what is now a trickle may grow to a flood which could disrupt both production and employment patterns here in the United States.

It seems to me that, if we want to sell in expanding world markets, and more importantly if we do not want to see American production and jobs disrupted by the flight of capital and industry abroad, we are going to have to remain competitive in design, quality, costs and prices with foreign industry.

Here I want to point out that, whatever our own problems of cost reduction, we must be granted full and free competitive access to foreign markets.

The theory that trade is a two-way street applies just as much to our foreign competitors as it does to us. If we are to give free access to the American market to foreign producers with size and efficiency comparable to ours and with substantially lower wage costs, we must ask an equally fair crack at their markets.

Five years ago in a speech on world trade, Henry Ford II made this comment:

"I feel very strongly that our efforts to relax trade barriers will be of real value to the world economy only if our foreign friends are equally diligent in

relaxing their own trade barriers."

The great new market that will explode in Western Europe in the next decade can give a tremendous boost to trade everywhere, if Europe's leaders recognize their responsibility to encourage the economic progress of the whole free world. Let us hope that they will, especially as the common market plan becomes fully effective.

Today, some European countries have tariff and quota barriers so effective, or penalties so high, as virtually to exclude all imports of various U. S. manufactured goods. Take the case of automobiles.

As you may know, our tariff on imported cars was recently lowered from 10 per cent to 8½ per cent. We have no quotas or other restrictive devices such as currency controls.

Now consider a 1959 Ford Fairlane 500 Fordor Hardtop, with full optional equipment, delivered in Pittsburgh. The suggested list price is about $3,600, including state and federal taxes, although, as in the case of many other products, it is common knowledge that the actual cost to the customer may be somewhat lower than the manufacturer's suggested retail price. If you wanted to buy the same car in France, England or Italy, you would have to hurdle barriers of severe quota restrictions and heavy cost penalties.

Ford Costs $8200 In France

In France, the delivered price of that car is about $8,200. It includes no less than $3,200 of duties, a 40 per cent premium for dollars called an equalization fee and special purchase taxes. You would also pay an annual use tax of about $240. In Italy, it would cost $5,800, with a penalty of $1,400, plus an annual use tax as high as $302.50. In England, the price would be about $8,000, with the penalty composed of a 30 per cent duty and a 60 per cent purchase tax—which is applied without discrimination, however, to all passenger vehicles.

As if these formidable barriers were not enough, imports are further limited by severe quotas and related devices. France admits only 12,000 vehicles a year from all sources, the United Kingdom presently restricts imports from the United States and Canada to 650 automobiles per year—even that quota has not been filled every year—and Italy admits only a few hundred American cars.

Now, I will be frank and say to you that a lot of people argue that even without such restrictions there would never be any substantial market in Europe for American automobiles and other goods. My answer to that is: If we offer no competition, why do many countries try so hard to keep us out? Why shouldn't the people who may want to buy our cars and other goods now be able to do so without prohibitive penalties?

As the standard of living grows, as new highway systems spring up all over the face of Europe, people will begin to want larger, more comfortable and safer automobiles, as well as the many other wonderful labor-saving devices of American manufacture. There could very well be a considerable growth of demand for that kind of product in the future.

If American manufacturers are deprived of a fair competitive crack at Europe's rapidly expanding markets, the resulting loss of potential sales volume will not only be felt by them but by all the other industries that supply them—steel, rubber, glass, chemicals, coal and all the rest.

I would certainly not suggest that our aid to Europe has been pure altruism. But I would say that we have been somewhat in the position of a fellow who has been watching out for the little fellow next door, and protecting him against the neighborhood bully. And suddenly one day we find that the little fellow has grown up, and has a good set of shoulders and biceps of his own. And we say: Son, the big brother act is over, and from here on out it's man to man.

Let us remember, however, that even if we were to achieve perfectly free access to world markets, it would do us little good unless we find ways to make our costs and, consequently, prices, competitive. This we must do if we are to sell in those markets as well as in competition with foreign goods in our own United States markets.

How can we keep our manufacturing costs competitive?

First of all, we can intensify the development and introduction of more efficient cost-saving machinery and methods. To do that we must have expanded capital investment. And that in turn means that industry must have profits adequate to create and attract that capital—profits that are not excessively taxed or squeezed to death between the pincers of soaring costs and price resistance.

Inflation Trend Must Be Halted

But ultimately the great problem before us lies in halting the present trend toward inflation.

It is indeed ironic that today many well informed Europeans apparently are more concerned about the stability of the American economy and the American dollar than they are about their own country's outlook.

As you all well know, the reasons behind the waning value of the dollar are many and complex. All of us are at fault. As a nation, our people have been too ready to take the easy way out of our very difficult problems, too ready to tolerate deficit financing of vast governmental expenditures, too ready to go along with the idea that a little inflation is a good thing.

The most insidious single factor of all has been repeated annual wage gains in excess of productivity. The fact that corporate employees' income has increased substantially in recent years, while prices have gone up, and while corporate profits have notably failed to grow, all underlie the situation described by Mr. McCloy—the wage-costing of American products out of the world market.

Ultimately the greatest single problem before us lies in halting this trend.

Some of our union leaders recently have been suggesting that the solution is to go to Europe and Japan and start pumping up the wage scales over there. To the contrary, capital is flowing into these countries to the benefit of all their economies. I suggest that instead of trying to upset their economies, we concentrate on correcting the deficiencies of our own.

American Markets Threatened

It seems clear that if the present pattern of inflationary wage increases is permitted to continue, the final consequence must be to price ourselves not only out of foreign markets—but out of our own markets as well. It must in due course lead to a hue and cry for protectionism that would isolate us from the world and greatly diminish our leadership and our influence in the struggle for world peace.

Let us hope that the impetus for change will come from an enlightened American public that understands the nature of the problem and that acts in its own enlightened self-interest. And believe me, it will not understand that problem without all the help it can get from industry, from enlightened labor leaders, from government, from our schools and our mass media of communication. It is our mutual job to see to it that everyone is alert to this particular danger.

If enough of us recognize this situation now, it is not too late to set a new course, to stop the inflationary trend, to hold our own markets and in due course to rebuild our dwindling export markets. This may be asking a lot, but I for one do not forget the literally thousands of letters we received during our recent labor negotiations, many of them from union members and their wives, asking us to hold the line against further price in-

(Continued on page 47)

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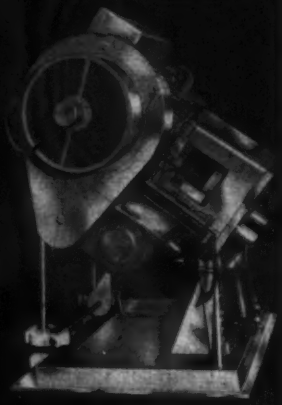

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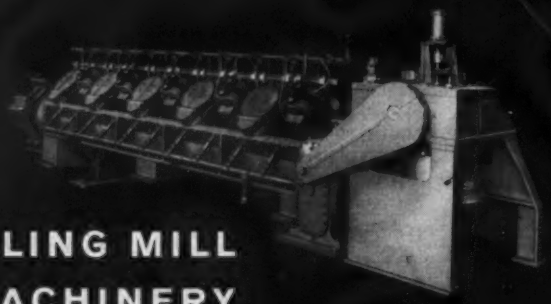

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WF 55

News Forum

This department includes a digest of news and comment about Connecticut industry of interest to management and others desiring to follow industrial news and trends.

♦ A ONE-GALLON utility bottle, featuring a new shape and available in both conventional and high density polyethylenes for the widest possible packaging range, has been added to the industrial line of Plax Corporation, Hartford.

Only one-fifteenth the weight of an equivalent glass container in high density polyethylene and one-eleventh glass' weight in conventional polyethylene, the new Plax bottle makes possible substantial freight savings for a large number of bulk products, including detergents, drugs, chemicals, flavorants and extracts.

The bottle's design—square in the cross section with generously rounded corners—helps cut shipping costs even more. By creating new efficiencies in shipping, storing and packing, the new utility containers can be expected to appeal to shippers facing continually rising transportation and labor charges.

♦ THE APPOINTMENT of Nelson E. Strong as sales manager and publications consultant for Finlay Brothers, printers, of Hartford, has been announced by President J. Herbert Finlay.

Mr. Strong began his career in printing as a proof boy for a New Hampshire company, where he learned to set type. Ultimately he became foreman, production manager and vice president of the firm. Following this, a major publications printer retained him as a consultant, during which time he organized the production department of a new plant. For the past three years he has served as New England sales representative. In his new capacity with Finlay Brothers he will direct the firm's expanded sales activity as well as advising on publication work.

♦ R. A. BRACKETT, executive vice president of the Spencer Turbine Company, West Hartford, was elected second vice president of the Foundry Equipment Manufacturers Association, Inc. at the 40th annual meeting held recently at Greenbrier, West Virginia.

Mr. Brackett, who is also a director of the Floor and Vacuum Machinery Manufacturers' Association, is chairman of the Committee of Vacuum Cleaner Affairs. This group works closely with the Department of Commerce on standardization of testing methods and rating of industrial vacuum cleaners.

♦ R. N. NICOLA has been named president of the Newton Company, Manchester, manufacturers of electronic equipment. He succeeds Gerard H. Morrissey, who becomes chairman of the board.

A graduate of the University of Connecticut, Mr. Nicola has a Master of Science degree from Rutgers University. After further graduate studies in the field of digital computers and pulse techniques at M.I.T., he taught for several years at Rutgers. He joined the Newton Company in 1954 as vice president and chief engineer.

The Newton Company is active in research, development and manufacturing of electronic equipment such as simulators, procedure trainers, general electronic test equipment, missile control component systems, and precision aircraft parts and accessory sub-assemblies.

♦ GILBERT C. COOVERT has been appointed factory manager for the Hartford operations of Veeder-Root, Incorporated, manufacturers of computers and counting instruments.

Mr. Coovert will be in charge of factory departments at the Sargeant Street and Homestead Avenue plants of the company, reporting to Leon J. Dunn, vice president of operations.

Recently a consultant for the Anderson-Nichols & Company of Boston, he was also general manager of the V & O Press and Henry & Wright Divisions of Emhart Manufacturing Company, Hartford, and vice president of the Skyworker Corporation, an Emhart affiliate.

♦ WENDELL W. SUYDAM, captain USN (ret.), who has been associated with aeronautical engineering for 15 of his 20 years in the Navy, has joined Hamilton Standard, division of United Aircraft Corporation, Windsor Locks, as assistant purchasing manager.

Captain Suydam has had numerous responsibile assignments since his

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graduation from the U. S. Naval Academy in 1938 and comes to the company from the Naval Air Station, San Diego, California, where he has been overhaul and repair officer.

In addition to his bachelor's degree from the Naval Academy, he holds a master's degree in business administration from Harvard and completed a comptroller's course at the Air University in Alabama.

♦ CONNECTICUT ELECTRIC COMPANIES are observing National Electrical Week during the second week of February this year, as part of an annual nationwide celebration to observe the birthday of Thomas Alva Edison and to develop public recognition of the outstanding accomplishments of the electric industry.

The 1958 observance included extensive school, public relations and sales programs throughout the state. Each year a highlight of the School Program is Science Youth Day, on February 11, Edison's birthday. The purpose of this day is to interest more junior and senior high school students in science and engineering careers.

Again this year, plans have been made to highlight educational, public relations, and sales efforts throughout the state. More than ever before, Connecticut's electric companies will make a concerted effort to tell the story of the vital part that electric industry plays in the state's economy and progress.

♦ THE PUBLICATION of a circular fully describing its new Milband band saw machine tool has been announced by The Henry G. Thompson & Son Company, of New Haven. Recently introduced to the metal cutting market, this is said to be the first band saw machine specifically designed and constructed from the base up to provide the ruggedness, rigidity, variable speed ranges and other characteristics needed to deliver the full cutting capacity of high speed steel band blades.

The circular carries complete information in this new machine, including full specifications and comparative performance data.

♦ SYSTEMATIC die set inspection and maintenance in the pressroom, whenever a die is removed from the press for sharpening, is discussed by Philip Marsilius, executive vice president of The Producto Machine Company, Bridgeport, in the newest issue of "Die Set Digest." He outlines a set of procedures which will insure getting the most from investments in die sets, as well as from the costly dies and presses with which they are used.

Another article of special interest

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to the die maker and designer reports comments from six important companies regarding their use of Producto's jam-free Quick-Fit die sets.

♦ A NEW high pressure gas storage trailer, Model KC-1093, is now available for the storage of such gases as air, nitrogen, and helium, which are used for pressurizing missile components and systems. Manufactured by Kahn and Company, Inc., Hartford, the new model is a companion to Kahn's high pressure compressor cart, designed for an operating pressure of 6000 psi, and containing 10 ICC-3AA storage bottles. Two separate manifolded systems are provided, each with a high pressure discharge hose and quick disconnect fitting. The control panel includes pressure gages, selector valves and shutoff valves.

The entire stand is mounted on a military type of pneumatic tire trailer and is fully enclosed for all weather use.

A Medallion Service, consisting of Paul Revere bowls, round trays, cigarette containers, and other holloware pieces in silverplate or stainless steel, is now offered by The International Silver Company. Designed for use as corporate gifts or awards, the items become "personal" by the application of medallions reproducing the company's trademark, or other graphic identification.

♦ CHARLES F. STANLEY, vice president of The Fafnir Bearing Company, New Britain, retired recently after a 40-year sales career with the company.

Mr. Stanley joined Fafnir in 1915 after being graduated from Wesleyan University. He started in manufacturing, but left Fafnir in 1917 to enlist in the Army. After his discharge in 1919, he rejoined Fafnir in the Sales Division. He became asistant general sales manager in 1927 and five years later

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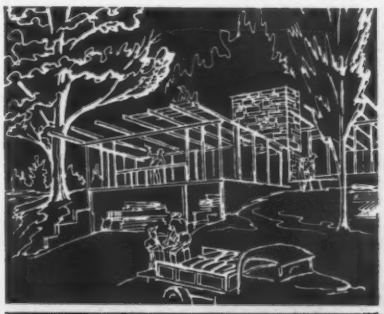

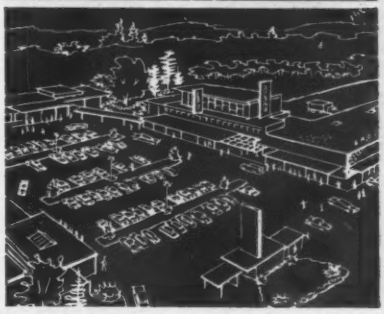

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was named vice president in charge of sales. In 1940 he was elected to the board of directors.

♦ EMPLOYEES of the Edwards Company, Norwalk manufacturer of electrical signaling systems, have received approximately ten days additional pay in a profit-sharing check distributed at the end of 1958.

Amounting to $68,417, the employees' share of Edwards profits for the period beginning May 1st and concluding November 1st, totalled 7.95 per cent of their regular earnings. Under a requirement governing eligibility for profit-sharing, 385 Edwards employees had the necessary service with the company, and received the checks.

Distribution of profits is a twice-yearly procedure at the company. Edwards management credits the program with building increased interest among employees, giving them a personal reason for maintaining high work standards and encouraging profits.

♦ REGION ONE of the Public Utilities Advertising Association has approved plans for its annual regional conference to be held February 26-27 in New Haven, according to Chairman Laurence A. Dunn of The United Illuminating Company, New Haven and Bridgeport.

Mr. Dunn said that the program will be built around the collective corporate image of electric and gas utilities serving New England and Eastern Canada, and its effect on customer attitudes, sales, consumer preferences, advertising, readership and believability and sales promotion programs.

♦ ROBERT S. REIGELUTH has been named president of The New Haven Trap Rock Company, and Albert L. Worthen, becomes vice chairman, according to an announcement following a regular meeting of the Board of Directors at the firm's headquarters in New Haven. Mr. Worthen was formerly president, and Mr. Reigeluth executive vice president and treasurer.

Since joining the sales department of the company in 1946, Mr. Reigeluth has served as assistant secretary, assistant treasurer, secretary and treasurer, and was appointed executive vice president early in 1957. A graduate of Phillips Andover and of Yale University in 1939, he also attended Harvard School of Business Administration. When he completed his post-graduate studies he worked for the Pittsburgh Plate Glass Company where he remained until World War II. He then served three years with the United States Navy.

Mr. Worthen, who moved up to vice chairman, entered the crushed stone business in the fall of 1911 as a construction engineer for the Connecticut Trap Rock Company. He headed this company at the time it merged with The New Haven Trap Rock Company in 1935.

He graduated from the Worcester Polytechnic Institute in 1910 with a degree in civil engineering. His first job was as a field engineer for the New England Telephone Company. The next year he joined New Haven Trap Rock's predecessor company which operated six quarries at Middlefield, Meriden, Plainville and Rocky Hill.

Long an active member of the National Crushed Stone Association, he served as president for three years and as a member of the executive committee and board of directors for many years.

♦ THE APPOINTMENT of Kevin J. O'Neill as assistant plant engineer of the Norden division of United Aircraft Corporation has been announced by R. A. Aspinwall, general manager.

Mr. O'Neill assumed his new duties the first of this year. He joined Norden after five years with United's Sikorsky Aircraft division where he was a supervising mechanical and electrical engineer in the plant engineering department.

A registered professional engineer in New York and Connecticut, he is a

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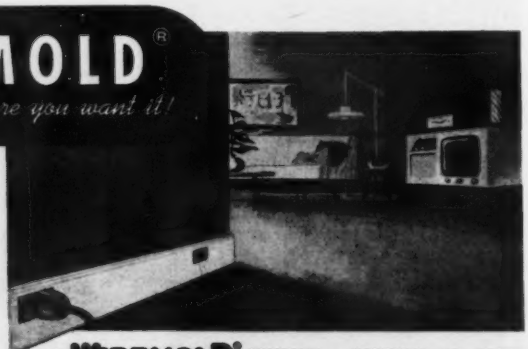


THE WIREMOLD® COMPANY • HARTFORD 10, CONN.

graduate of Stevens Institute of Technology and a member of the National Society of Professional Engineers and the American Institute of Electrical Engineering.

♦ A $17 MILLION CONTRACT for production of HSS-2 twin-turbine anti-submarine helicopters has been awarded to Sikorsky Aircraft Division of United Aircraft Corporation by the U. S. Navy, the company has announced.

The contract was the second awarded for the new helicopter. The original contract for the HSS-2, awarded last year, was for design data, mockup and initial production. It amounted to $15 million, making a total contract award of $32 million for the new aircraft.

♦ A NEW CATALOG, recently announced by the Viking Tool Company, Shelton, describes the company's new line of throw-away insert tool holders that eliminate the necessity for a separate chipbreaker.

The new design features a top clamp that is carbide hard faced, which combines chip control with insert clamping. Included in the catalog is a section on throw-away inserts in four different cutting materials—carbide, cast alloy, oxide, and high speed steel. Also, the back cover is a carbide grade comparison chart, which is convenient and completely tabulated. Copies of the catalog, #581, are available from the company.

♦ FARREL-BIRMINGHAM CO., INC., Ansonia, has announced the appointment of Franklin R. Hoadley, Jr. as manager of the company's sugar mill division. He succeeds D. Kenneth MacLean, who, at the time of his retirement December 1, last year, held the longest service record of all active Farrel-Birmingham employees.

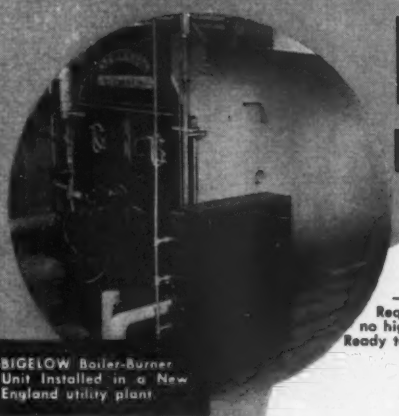
Mr. Hoadley, who has held the post of manager of F-B foreign sales since 1955, has had an unusual opportunity for gaining first-hand knowledge of the cane-milling phase of the sugar industry, having studied installations in many parts of the world's sugar belt during the past three years. He will also continue to head Farrel-Birmingham's foreign department as manager of international operations.

♦ DISPLAY WORKSHOP, Hartford, has recently directed the installation of the third of four giant murals promoting the State of Connecticut at the Savarin eastbound restaurant on the Connecticut Turnpike in Milford, operated by the Union News Company.

Called "The Birthplace of Mass Production," the new mural shows Eli

self-contained steam production to fit your need

BIGELOW BOILER-BURNER UNITS



BIGELOW Boiler-Burner Unit Installed in a New England utility plant

• PRE-ENGINEERED —Mounted on steel frame— Requires no special foundation, no high stack, no induced draft fan. Ready to operate as soon as connections are made.

• 80% EFFICIENCY

• RESERVE CAPACITY —Maximum Continuous Output Rating 50% greater than nominal S.B.I. rating.

• EASY ACCESSIBILITY . . . . for cleaning and inspection

• COMPLETELY AUTOMATIC— OIL, GAS OR COMBINATION GAS AND OIL FIRING.

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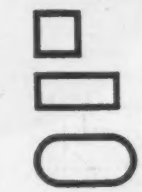

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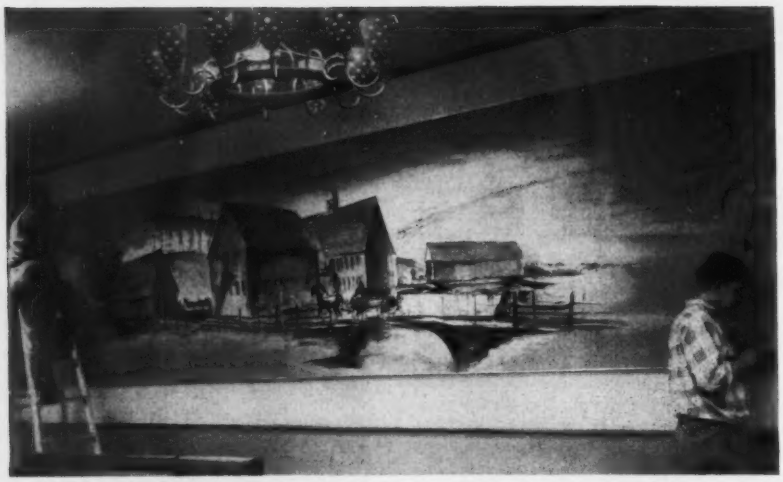

"Birthplace of Mass Production" . . . Eli Whitney's original firearms factory is shown in the giant mural at the new Savarin restaurant of Union News Company on the Connecticut Turnpike. To symbolize thousands of industrial products manufactured in Connecticut, six of them are highlighted with the Eli Whitney factory. Old and new models are shown of revolvers, clocks, knives, silverware, locks and the transition from the old hook and eye closures to the modern zipper.

Whitney's original firearms factory in Hamden, where mass production first began with the use of interchangeable parts.

The colorful drawing, prepared for Union News by artist Carl Browning at Display Workshop, is 26 feet long and five feet high. It has been hung in the main dining room of the Milford Savarin eastbound restaurant under the direction of Harold Post, head of Display Workshop.

Accompanying the giant industrial mural is a secondary one, nine feet by five, which shows men busily engaged in a research laboratory.

"These two paintings together," said Hugh A. Gage, manager of Restaurant Operations for Union News, "were selected by Union News from many proposals as best indicating the leadership of Connecticut in the industrial field. Here it was that the modern factory system first began. It has prospered in Connecticut and spread throughout the world during the last century and a half because of new techniques developed through diligent work in thousands of research laboratories."

The previous two murals already in place in Savarin restaurants along the Connecticut Turnpike show the resort areas and the agricultural abundance of Connecticut. The last giant mural, now being constructed, will emphasize the historical aspects of the Constitution State.

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The Case of the Clumsy Worker

1.

"This man can do the work of ten," Bill Casey realized,
"But if I keep him *all* my men will soon be victimized.
He's always mashing someone's toe or bashing in a head.
I'd better call a Travelers man before I'm in the red."

2.

When Travelers' man arrived he stated sympathetically,
"You need our Workmen's Comp and Public Liability.
We'll put our safety experts on the problem right away—
To make this man productive in a less destructive way."

3.

As promised, Travelers safety engineers dug in and worked
To study Casey's operation—find where dangers lurked.
"Our Workmen's Comp and Liability," said Travelers' man,
"Cuts accidents and lowers rates—a money-saving plan."

4.

So up went Casey's profits and his company's morale—
The clumsy worker hurt no one, alone in his corral.
Suppose you have a nemesis—inanimate or human:
Call in a trusty Travelers man—a man of great acumen.

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♦ GROVER M. STEELE, JR., who has been associated with American Hardware Corporation, New Britain, for 52 years, has been named general manager of the company's Corbin Wood Products Division. Announcement was made by Evan J. Parker, company president.

Mr. Steele has been associated with the division since its beginning in 1912 and most recently has been sales manager for the division's line which is a complete selection of letter boxes for use in schools, hospitals, apartment buildings, hotels and other buildings.

♦ MOTORIZED TABLE POSITIONING with accurate horizontal and cross lead screws has been developed for the Moore Universal Measuring Machine by Moore Special Tool Company, Inc., Bridgeport. The motorized lead screw drive is offered as optional equipment.

Designed to provide ultra-fine "missile era" precision measurement and exacting inspection standards, the Moore Universal Measuring Machine is suited for measuring larger work pieces to laboratory tolerances.

Capable of measuring to one-third of a "tenth," the new machine marks a significant advance in overcoming the present limitation of measurement to the ten-thousandths of an inch.

The new measuring machine also offers for the first time: A work capacity of 11" by 18" by 18" in height, choice of an electronic indicator supported on an accurate, rotatable spindle, or a universal microscope for pickup, and a combination of rectilinear and angular positioning, making possible the measurement of the most complex contours.

♦ THE APPOINTMENT of Anthony A. Cooper as assistant general production manager of the Fafnir Bearing Company has been announced by Thomas J. Leonard, general production manager.

Before his appointment Mr. Cooper was assistant production control manager. He joined Fafnir in 1950 after graduating from Williams College and spent several months in the tool and die division. Late in 1950 he left for two years of service with the Army. On his return to Fafnir he was assigned to the company's New York office for field training. Subsequently he served in the rate setting, cost and production departments at the New Britain plant. He was named assistant production control manager in November 1956.

♦ A NEW WAREHOUSER, narrow aisle, electric powered lift truck in-

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EXPRESS, INC.
"The motor carrier with more go-how"
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Indianapolis • Jersey City • Metuchen • New York City • Philadelphia • Pittsburgh • St. Louis • Trenton • Zanesville

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corporating a 24 volt electrical system, which with a host of design innovations to increase operational efficiency is said to provide for the accomplishment of more work, has been introduced by Yale Materials Handling Division of The Yale & Towne Manufacturing Co.

The new trucks are built in 2,000, 3,000 and 4,000 pound capacity straddle-stacker models, all of which will work comfortably in aisles less than six feet with normal loads.

♦ A REVOLUTIONARY new method of packaging heavy products for shipment was disclosed recently when Royal McBee Corporation, Hartford, began shipping its electric typewriters in a lightweight, form-fitting polystyrene pack.

The new pack weighs only 3½ pounds and serves as the complete shipping container for the 47-pound typewriter. The new pack was developed by Royal McBee, Koppers Co., Inc., Pittsburgh, Pa., and Worcester Molded Plastics of Worcester, Mass.

Major advantages of the new method, according to the company, is that it adds greatly to the protection of the precision machine during its shipment. The compact case is molded "cocoon style" inside to fit every contour of the typewriter snugly so that the machine is held firmly in place. The expanded polystyrene material, it is said, is highly shock-absorbent and "soaks up" impacts instead of transferring them.

♦ A NEW BLENDER, the "Regent," made its bow at the National Housewares Show in Chicago last month. Manufactured by The Iona Manufacturing Company, Manchester, the "Regent" joins the growing family of Iona electric appliances as a budget-priced sister of the "Ionablend," distinguished in the electric appliance field as "the blender with the handle."

The new blender has a 38-ounce heat-resistant jar, cloverleaf design for easy pouring and blending and a two-speed supertorque motor which permits both blending and liquefying.

♦ A PROTOTYPE of an extruded nuclear fuel element for a power reactor was displayed recently at the 23rd National Power Show, New York Coliseum. The principal component of the fuel element, a uranium alloy core completely encased in zirconium alloy, was extruded by Anaconda's subsidiary, The American Brass Company, at Waterbury.

The prototype element, which will shortly be evaluated in a test reactor, is displayed through the courtesy of E. I. du Pont de Nemours & Co., for whom it was assembled by Nuclear Metals,

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Inc. of Concord, Mass., in connection with du Pont's contract with the Atomic Energy Commission for development work on a special type of power reactor. Nuclear Metals pioneered the co-extrusion process used in producing the clad element.

Production of full-scale fuel element extrusions of this type was carried out at The American Brass Company principally because their experience over the past few years in the extrusion of large quantities of uranium components has demonstrated the suitability of their equipment and the adequacy of their technical know-how.

♦ THE APPOINTMENT of Enthone, Inc., of New Haven, subsidiary of American Smelting and Refining Company, as exclusive distributor for the Abbey Process Automation System, has been announced. The agreement covers that portion of the United States east of the Rocky Mountains. Enthone is also authorized to sell Abbey equipment on a non-exclusive basis in the remainder of the United States and in Canada.

The Abbey Automation System is built around several new patented devices which give fully automatic equipment the flexibility of hand operation. Vertical movements of work carriers in and out of processing tanks do not have to be synchronized with horizontal or "transfer" movements from one tank to the next as on covnentional plating machines.

Enthone, Inc. has also announced that it has taken over and will continue in its own name the business of its wholly-owned equipment subsidiary, Comco, Inc. Comco's manufacturing facilities will be integrated with Enthone's and operate as the equipment department of Enthone.

♦ PRATT & WHITNEY Aircraft has been given a $9 million contract to design and develop a liquid-fueled, high-energy upper-stage rocket engine. The new stage engine, used in conjunction with a first-stage vehicle, would permit placing a satellite weighing several thousand pounds into orbit.

The contract was announced in Washington by Roy W. Johnson, director of the Advanced Research Projects Agency of the Department of Defense.

The design and development contract marks Pratt & Whitney Aircraft's entry into the non air-breathing, high-energy engine field. Pratt & Whitney aircraft engines already power two missiles.

♦ CONSOLIDATED CONTROLS CORP., Bethel, a subsidiary of Consolidated Diesel Electric Corporation, Stamford, has received contracts totaling approximately $600,000 from the United States Atomic Energy Commission and the General Electric Co., Knolls Atomic Power Laboratory, for design and manufacture of primary plant instrumentation for the first nuclear powered United States Navy destroyer.

The nuclear propulsion system for this ship and its land prototype are being designed by the Knolls Atomic Power Laboratory in cooperation with the Naval Reactors Branch. This is a United States AEC Laboratory which is operated by General Electric Co., located in Schenectady, New York.

Consolidated Controls Corp. recently completed a major plant expansion program to accommodate its accelerated activity in nuclear instrumentation design and production.

♦ A NEW, illustrated brochure published by Waterbury Rolling Mills, Waterbury, describes and pictures the effects of its precision-annealing technique on spring temper phosphor bronze sheet and strip.

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Enlarged photomicrographs compare the fine grain structure of Waterbury's precision-annealed metal with the coarser structure of ordinary annealed phosphor bronze. Other comparison photos graphically illustrate the ability of precision-annealed phosphor bronze to withstand severe bends. Some typical applications are pictured and details are given on the many advantageous characteristics of this specially processed phosphor bronze.

Copies of the bulletin are available on request from the company.

♦ THE ESTABLISHMENT of two annual awards has been announced by The Gray Manufacturing Company. The A. Y. Atwell Award will be presented to the outstanding distributor of the company and the Fred Hornsby Award to the outstanding salesman.

The awards honor Mr. Atwell of Boston, founder of the Atwell Company, Gray distributor in New England since 1947, and Mr. Hornsby of Hartford, vice president of the Atwell Company.

Company officials, distributors and representatives of the major manufacturers of dictating machines assembled recently for a surprise testimonial dinner to Mr. Atwell. John W. Wibel, Gray president, presented the only gold Keynoter ever made to Mr. Atwell.

A. Y. Atwell (right) founder of the Atwell Company of Boston, receives the only gold Keynoter Audograph ever made from John W. Wibel, president of the Gray Manufacturing Company.

HARTFORD NATIONAL BANK & TRUST COMPANY — ESTABLISHED 1792

Hartford National Bank
and Trust Company

CONDENSED REPORT OF CONDITION
As of December 31, 1958

RESOURCES

Cash and Due from Banks	$104,065,079.58
United States Government Obligations, Direct and Fully Guaranteed	104,893,351.59
State and Municipal Bonds	45,671,788.39
Other Bonds and Securities	2,336,047.39
Loans and Discounts	197,592,569.58
Banking Houses	3,602,000.00
Other Assets	596,702.90
	$458,757,539.43

LIABILITIES

Deposits—Demand	$363,831,500.67	
Time	52,127,013.16	
		$415,958,513.83
Reserve for Dividend		446,250.00
Reserves: Taxes, etc.		2,821,033.72
Other Liabilities		2,760,179.13
Capital (1,190,000 shares $10.00 par)	$ 11,900,000.00	
Surplus	18,100,000.00	
Undivided Profits	6,771,562.75	
		$ 36,771,562.75
		$458,757,539.43

Head Office: Main & Pearl Streets, Hartford, Conn.

Established 1792 *Member F.D.I.C.*

♦ GLENN P. BAKKEN, president of Chase Brass & Copper Co., has announced the appointment of Walter L. Smith as assistant to the president. Replacing Mr. Smith as vice president—operations, is Gilbert R. Boutin, formerly works manager of the Chase Metal Works.

Recently Mr. Smith announced his intention to retire in August, 1959. In commenting on the appointment Mr. Bakken said that this move is being made at this time to utilize Mr. Smith's knowledge and experience in an orderly transition within the operating organization.

Mr. Smith began his career in the brass business in 1915. He advanced rapidly through a number of positions with the company and in 1946 became works manager of the Chase Metal Works and the former Chase Rolling Mill. He was elected vice president—operations and a member of the Chase board of directors in 1952.

Mr. Boutin joined Chase in 1950 as plant controller at the Chase Metal Works. In 1954 he was promoted to administrative and control manager; in 1955 to assistant works manager, and in June, 1957 he became works manager.

♦ A LIQUID acid solution that produces a bright, smooth surface on stainless steel, aluminum alloys, and low and high carbon steels, is fully described in Technical Data Sheet No. 81, a three-page usage and instruction sheet pre-

pared by MacDermid, Incorporated, Waterbury.

Called Electro-Gleam 55, the product is said to remove scratches and other surface defects, deburrs and removes sharp edges, improves corrosion resistance and adherence of plated work, and reduces friction. Stainless steel can be used as treated with Electro-Gleam 55. Aluminum may be used as treated or anodized, chromated or plated. Carbon steels are usually either deburred, smoothed or prepared for electroplating by treatment in this universal solution.

♦ THE ADDITION of rubber mounting rings to its line of products has been announced by Wasley Products, Inc., Plainville. For many years the company has been custom designing and manufacturing rubber seals for ball and roller bearings.

Mounting rings are interposed between the bearing outer ring and its supporting housing to reduce vibration and noise level of the bearing and for economy in the manufacture of the bearing support housing, since flexing rubber will allow greater housing bore roughness and tolerances.

Rubber housing hardness and dimensions can be calculated to dampen harmonics critical to specific mechanism and to insulate bearing from thermal transfer and expansion differentials.

♦ THE NEW Fenn Compact 5-in-1 Wire Line introduced and displayed in operation at the Metal Show recently, is said to have created wide interest. It draws, flattens, edges, sizes, shapes, electronically gages, and accurately coils the finished product in traverse wound bundles.

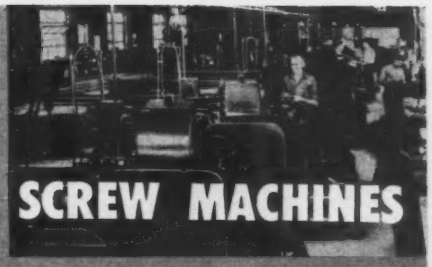
With a capacity up to ⅜" entry diameter and at production speeds up to 600 fpm, the line performs the following operations: draws entry wire to accurate size through carbide dies; flattens wire in a precision Fenn 8" mill equipped with carbide shell rolls with both internal and external cooling; sizes and edges flat in the versatile Fenn 3 TH Turks Head.

Exit flat is gaged for thickness with Pratt & Whitney electro-limit gage. A Fenn Hydraulic Traversing Take-up Reel coils in accurately traversed bundles. The entire line operates from a single, infinitely variable speed, AC motor with simple electric drive.

♦ A SYSTEM to control the position of shock waves set up by supersonic speeds in the engine inlets of the North American B-70 Valkyrie bomber will be designed, developed and manufactured by Hamilton Standard, divi-

Exclusively

DAVENPORT HIGH SPEED SCREW MACHINES



The Davenport Five Spindle Automatic Screw Machine produces parts at high speed with uniform shape to close tolerances. No costly secondary operation necessary.

Parts from all metals 1/16" to 3/4" round; 1/16" to 5/8" hex. 1/16" to 1/2" square up to 150 parts a minute.

Minimum Order: 25,000 Steel or Alloy
50,000 Non-Ferrous Metal

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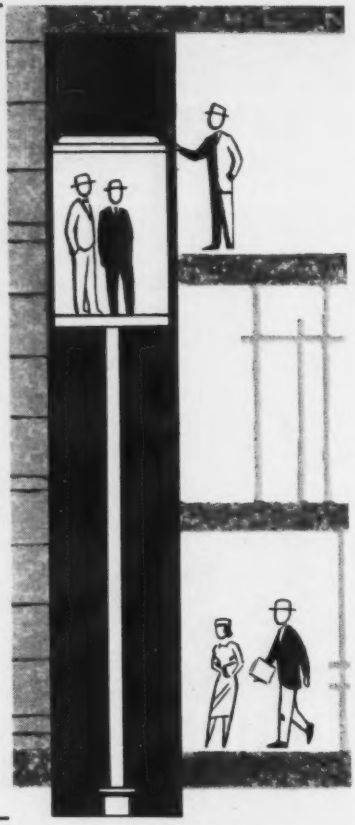

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sion of United Aircraft Corp., Windsor Locks.

Charles M. Kearns, general manager of Hamilton Standard, said that compressibility effects in the inlets admitting air to the engines of supersonic aircraft can adversely affect the engines' performance. For the best airplane and engine performance at such speeds, he said, the shock waves must be held at a set position within the engine air intake. Deviation from this position will cause major engine efficiency losses.

Proper functioning of the new system depends on split-second reaction to minute changes in air pressure at extreme altitudes and at speeds ranging from 800 to 2,000 miles per hour. At such heights, which might exceed 70,000 feet, the pressure of air surrounding the aircraft is a fraction of that at sea level. Pressure sensors must be more precise over wider pressure ranges than any previously known in the aviation field.

The system relies on hydraulic and mechanical principles developed in ten years of design, development, and manufacturing of control systems for metering the flow of fuel to jet and turboprop engines used in a wide variety of military and commercial aircraft. Basic parts are similar to those used in such controls. The new system senses the pressure of the air entering the engine, compares this reading with the engine's requirements, then causes a mechanism to change the shape and size of the inlet so as to control the shock wave position and provide the proper amount of air to the engine.

◆ ANNOUNCEMENT has been made by The Ingraham Company, Bristol, of plans for establishing an assembly plant in Laurinburg, North Carolina.

Robert E. Cooper, president, said that certain changes in manufacturing operations in Bristol would be effected with the establishment of the new assembly plant, but that plans call for continuing in Bristol the manufacture of all parts required for assembly in the Laurinburg plant.

The new Laurinburg plant would be about one-sixth the size of the Bristol Ingraham plant. The move marks the establishment of the third branch plant of the company outside of Bristol. The first was in Toronto in 1941, the second was in Elizabethtown, Kentucky in 1954.

Awards Dinner Honors Twenty-One Apprentices

(Continued from page 11)

projected needs; to improve the quality of training by giving recognition to

journeymen and supervisors who, in daily shop routine, do outstanding work in helping apprentices acquire skills; to improve the quality of training by stimulating apprentices into making the intensive learning effort needed for qualification as finalists in annual competitions; to bring young men with growth potential to management's notice; to acquaint potential candidates for apprenticeship with training opportunities in metal working; to bring to the attention of young men and guidance instructors in secondary schools the basic preparation in math and science needed for success in apprenticeship."

Early last summer rules and regulations of the contest were worked out by a Contest Committee whose members were: John Dewhurst, Arrow Tool Co.; John Argazzi, Argazzi Tool Co.; George Lamb, Moore Special Tool Co.; A. L. Knapp, Pratt & Whitney Co., Inc.; Francis McGurkin, Connecticut Chapter, American Society of Training Directors; I. Harry Hyman, U. S. Dept. of Labor, Bureau of Apprenticeship Training; Lawrence Eddy, State Dept. of Education, Division of Vocational Education.

Following completion of the rules and regulations, special bulletins were mailed by MAC and other sponsoring organizations to their respective memberships. These bulletins stimulated the enrollment of 42 metal trades apprentices from 30 companies. Due to a sharp drop in training, caused by the business recession, there were seven less apprentices entered in this year's contest. However, these contestants were entered by 30 companies this year as compared to 27 companies who entered 49 contestants in the 1957 competition.

All apprentices were given a six-hour written examination, with the top ranking 21 being selected as finalists. Each finalist was then visited at his company by a team of judges who rated his work. The six apprentices with the highest rating were nominated as the outstanding apprentices of 1958.

Royal McBee Makes Memorial Contribution To University

(Continued from page 10)

of the company. Under his guidance Royal soon assumed a position of leadership in the typewriter manufacturing industry. With the advent of World War II, Royal, under his direction, converted to the manufacture of war materials, and following the war, completed an amazing 90 day reconversion to typewriter production.

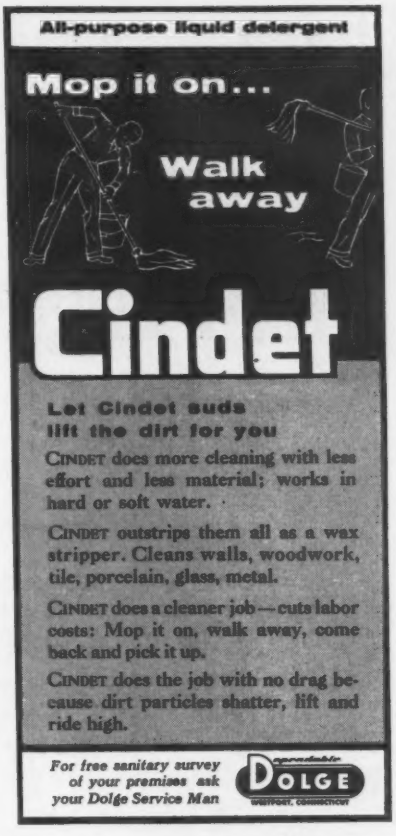
Mr. Cook served the community in which he lived with a zeal unsurpassed by anyone. He served as treasurer of the Hartford Salvation Army; as trustee of the Hartford Theological Seminary and the Hartford YMCA, of which he was a member for 52 years. When the Hillyer Institute needed policy guidance and over-all supervision as a part of the YMCA, he served as chairman of the Hillyer Committee. He was a former president of the Hartford Community Chest, the City Park Board and the Hartford Rotary Club.

Mr. Cook, at his death, December 13, 1955, at the age of 80, was a director of the Royal McBee Corporation, the Phoenix Fire Insurance Company, the Connecticut Fire Insurance Company, the Veeder-Root Company, the Spencer Turbine Company, Taylor and Fenn Manufacturing Company, the Swift Chemical Company and the Silent Glow Oil Burner Company, of which he was also board chairman.

Other honor guests at the news breakfast were: Alfred C. Fuller, chairman of the board, Fuller Brush Co.; Wilbur C. Stauble, chairman of the Founder's Fund, industry and commerce division, and president of Veeder-Root, Inc., and Holo-Krome Screw Corp.; Royal McBee officers, two employees who are university instructors, and the youngest and oldest of 80 Royal McBee employees attending the University.

After expressing his gratitude on behalf of the University of Hartford, its founders, regents, faculty and more than 9,000 students for Royal McBee's generous gift, Mr. Fuller said of Mr. Cook, "We were friends for more than 30 years. Charlie Cook was never too busy to listen to the problems of people. He worked all his life for the employment of the handicapped, and he was willing to give those who had violated the rules of society a chance to establish themselves as useful and productive members of the community. There is much more that could be said concerning C. B. Cook's activity along civic lines, but I believe that we might sum it up by saying that there is no citizen of Connecticut, living or deceased, to whom a memorial is more appropriate."

Commending Royal McBee for the public spirit it displayed in presenting so generous a gift to the University of Hartford, Mr. Stauble observed that this gift "is an indication that Royal McBee is thinking in terms of continued help to its employees and their children who wish to improve themselves by education. It is for this kind of serious and ambitious students that 600 committee members have combined their efforts and have raised over $2 million for buildings on the new campus."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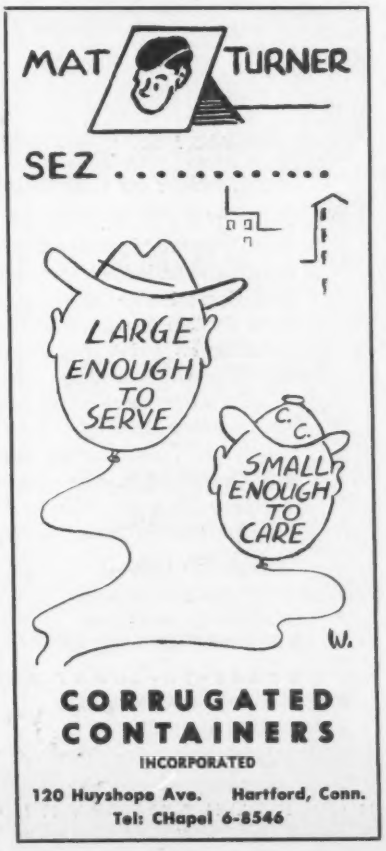

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By Fredrick H. Waterhouse
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When is excessive absenteeism cause for discharge?

Here's What Happened!

The employee in question worked in an assembly unit where employees work in teams and the absence of one employee disrupts the team work. Over a period of years the employee had been absent for days or weeks at a time until finally in 1958 she worked 5 days, was absent 4 weeks and 2 days, worked 3 weeks and 4 days, was absent 6 days, and then was discharged after working continuously for about 2 weeks. Her record for absenteeism in previous years indicated an absence of anywhere from 33 to 76 days per year, not including official leaves of absence. This excessive absenteeism was brought to her attention on numerous occasions and she was warned that it could not continue. The situation had also been discussed by the Plant Manager with the employee's husband since her husband was the president of the local union. However, there was no improvement in her attendance record and it actually became worse. Because of the apparent inability to remedy this excessive absenteeism, the company discharged the grievant. The union claims that it was customary for the company to impose a disciplinary lay-off in cases of absenteeism, and since there was no such action taken by the company in this case, the discharge was premature and should be reduced to a disciplinary lay-off. The company felt that it had been sufficiently considerate and that a disciplinary lay-off would be meaningless and there was nothing in the agreement between parties requiring such a lay-off before discharge for absenteeism.

Must the company impose a disciplinary lay-off before discharging an employee for excessive absenteeism?

After commenting that the employee's absences were clearly excessive, and the company was justified in its opinion that she was not meeting the minimum standards of attendance for an acceptable and satisfactory employee, the arbitrator stated it was his belief that the difficulties presented by the dispute arose because the company was too lenient (up to the point of discharge) in its handling of this employee. He felt that such special treatment and consideration was at the root of the difficulty. He, therefore, ruled that the discharge was unjustified and reduced the penalty to a disciplinary lay-off, without back pay, and ordered that the employee be reinstated.

Do employees who were foremen at the time the union arrived, have seniority rights in the bargaining unit?

Here's What Happened!

Because of a cut-back in work the company informed the union that four of its supervisory personnel were being returned to the bargaining unit. As a result of this shift of employees three persons were laid off on a seniority basis and five others were placed in a lower labor grade. The contract provided that employees who "after attaining seniority status" are promoted to supervisory positions will be entitled to their total seniority if subsequently returned to the bargaining unit. The union did not question the seniority status of two of the foremen who were returned to the bargaining unit, but claimed that the other two had no seniority status and were not entitled to be returned to the bargaining unit since they were never employed in the bargaining unit after the certification of the union. It was the union's claim that as they had never worked in the bargaining unit as such, they never attained seniority status as mentioned in the contract and thus could not bump anyone in the bargaining unit. The company claimed that no distinction was made or intended as to whether a supervisor returning to a bargaining unit job had worked within the bargaining unit before or after certification of the union. It argued that if it were the intention to deprive employees of seniority if they had been promoted out of the unit before the advent of the union, the contract would have so provided.

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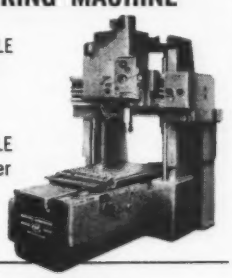

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Must an employee be in the bargaining unit when the union first arrives to attain seniority?

The arbitrator ruled that seniority is strictly a contractual right arising from an agreement between the employer and the union and that the same applies to the concept of "bargaining unit." Therefore, he ruled that unless the agreement provides to the contrary, the employees who were never employed within the "bargaining unit" could not accumulate "seniority." Finally, as the two employees in question had never been in the bargaining unit since the union was certified, they could not attain any seniority in the bargaining unit and it was improper to return them to the unit on the basis of seniority.

Is the placement of a comma in a contract important?

Here's What Happened!

A few months ago we reported a case in which the result was affected to some extent by the placement of a comma in a certain contract clause. To emphasize this importance of punctuation, here's another.

The contract in question was the first contract between the parties. Prior to the recognition of the union the company had allowed the employees in this unit to begin their wash-up period two-tenths of an hour before the noon lunch hour and two-tenths of an hour before the end of the shift, and check out one-tenth of an hour before these times. When the union took over it presented the company with its standard contract calling for a five minute wash-up period which the company accepted. A week after the agreement was signed the company discontinued the prior practice and invoked the five minute wash-up time clause now in the contract. The union International Representative claimed that this was a violation of the contract because when it was called to his attention by the employees that they were better off before the union arrived, it was agreed their better condition which included the clock-out period should be protected by reference to "present practices." The union then referred to the clause in question which provides "There shall be a five-minute wash-up period at the end of the shifts to be paid for by the *Company,* in accordance with present practices." The company claimed that the clause "in accordance with present practices," referred to the method of paying for this five minute wash-up period as part of the employees were on hourly rates and some were on incentive rates and some language had to be added to indicate the manner of payment. No mention was made in the contract of the previous clock-out time.

What is preserved by a "present practices" provision?

The board of arbitration pointed out that the comma followed the word "company" and not the word "shift" in the quoted clause and, therefore, the clause "in accordance with present practices" modified the entire sentence and not merely the manner of payment. Since the five-minute wash-up period had preceded a six-minute clock-out time for 25 years, it must be concluded the six-minute clock-out time was one of the "present practices" to be continued.

Specialists In Metal
(Continued from page 8)

Nickel Silver and Phosphor Bronze

The commercial application of nickel silver was already well established at the time that Waterbury Rolling Mills actually began production early in 1907. "German silver" as it was called in everyday parlance, was widely used as the base metal for plated silverware . . . still one of its major applications. The name "German silver" was given to the metal by the two German scientists who developed it. Actually, the origin of nickel silver goes back many centuries to a white metal known in southern China as "packfong". When introduced in Europe, its popularity spurred an intensive search for native ores from which to make it. In 1820, the two scientists, basing their research on data obtained from the Chinese, simultaneously discovered a perfected "packfong" and called it "Deutsches Silber".

The Waterbury Rolling Mills nickel silver that industry knows today is a composition of copper, nickel and zinc. The proportion of these elements are varied to produce different types of nickel silver for specific purposes. For example, the various alloys produced by the company fall roughly into three classifications—1. Ductile Type, for holloware, flatware and other drawn or spun applications requiring easy formability. 2. Spring Type, for springs, relay components, diaphragms, etc. 3. Leaded Type, for keys and other uses where machinability is important.

While nickel silver was well known when Waterbury Rolling Mills began to produce it, the company's other major product, phosphor bronze, was a relative newcomer to popular commercial use. This fact is perhaps more surprising when we consider that this metal is a descendant of the first copper

tin alloy produced by prehistoric man at the start of the Bronze Age around 5000 B. C. The addition of phosphorus to bronze, however, did not become an established metallurgical practice until 1871. Actually, the phosphorus is not so much an ingredient of phosphorus bronze as it is a deoxidizing agent. The addition of minute amounts of phosphorus to the molten bronze "cleanses" the metal, resulting in an alloy with high fatigue resistance, high elastic limit, high corrosion resistance and other extraordinary physical properties.

These properties make phosphor bronze particularly suitable for electrical spring applications. Consequently, the company obtained an early foothold as a supplier of this metal to the lustily-growing electrical industry. At present, you will find Waterbury Rolling Mills phosphor bronze alloys in electrical appliance parts, relays, controls, marine parts, business machine parts, clips, speed nuts, diaphragms, lock washers, bearing plates, plating racks, contacts, and in many other items.

Custom-Processing Metal To Fit the Use

Over the years, through experimentation and experience, the company has developed its methods of custom-processing metal to specific purposes. By delicate adjustment of the alloying elements and controlled variation in the reduction and annealing processes, it is possible to accent certain properties without injuring others.

Waterbury's custom-processing dates back to the early days of the company when the science of metallurgy had not reached its present state of development. As Mr. Somers expressed it, "When a customer would order a particular alloy for a use for which it was not quite suited, we would 'doctor' up the mixture a bit to give him exactly the properties he needed". The intimate, specialized knowledge of metal indicated by this statement is the keynote of the company's success.

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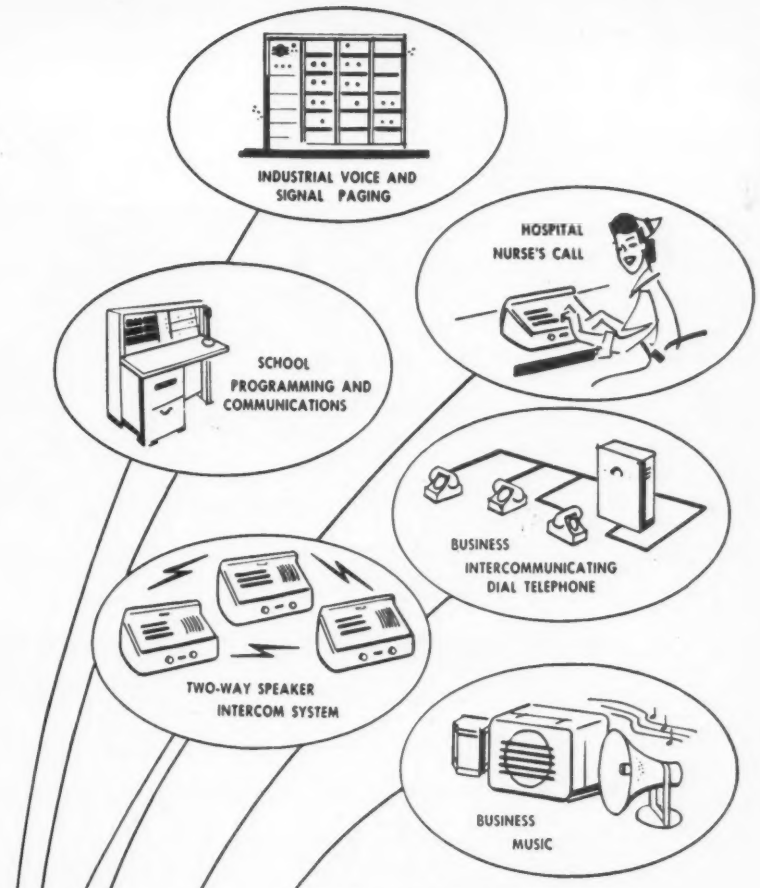

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Long-Range Planning and Budgets

By G. R. STUBBLEBINE, *Controller, The Ensign-Bickford Company*

♦ The term "long-range planning" can be defined simply as the process of setting long-term objectives for the business and then proceeding to the development of a specific plan or plans for reaching these objectives. Sometimes this process is referred to as long-range profit planning. The terms are for the most part synonymous since any constructive planning for a business organization is inevitably reduced to the common denominator of profit or estimates of profit before it proceeds very far.

The phrase "long range" has been found by the process of trial and error in many companies to be about five years. Any period much shorter than this is primarily concerned with solving current or immediately foreseeable problems. Any period going much beyond this will have a tendency to become rather nebulous and divorced from presently available facts.

Why Do Long-Range Planning?

The primary reason for attempting long-range planning is to subject the future of a company to some form of intelligent direction and control as opposed to the opposite course of drifting and meeting problems and new developments as they arise. More specifically, some of the benefits to be reasonably expected would be:

1. The company is more alert to opportunities and by intelligent forward planning can often "jump the gun" on competition.

2. Sound decision-making is facilitated. The right course of action on many short-range problems is often obvious when viewed against the perspective of an over-all long-range plan.

3. Teamwork within an organization is improved. When the group knows where it is going, there is much less likelihood of petty internal bickering.

4. Adequate lead time is established for capital requirements, facilities, and personnel.

5. Guides for annual budgets are established. Each annual budget is established to meet that part or parts of a long-range plan which it is intended to accomplish that year.

6. Preparation of meaningful special projects is possible. Since the company's operations and profits five years hence will be largely the result of what is accomplished in each of the next five years, a guide to worthwhile activity is readily established.

What Are the "Cons" of Long-Range Planning?

There do not appear to be any definite "Cons" on long-range planning, but there are some common difficulties encountered.

1. The establishment of goals must represent the soundest, most realistic appraisal of the company's potentials possible. This is not easy. It requires a strong-minded approach which is willing to question any past practices or policies in the light of present conditions and opportunities. It also requires a willingness to set goals and objectives which will be a real challenge to meet. A goal set too low can often be as bad as no goal at all since it leaves an uncovered area which present or potential competition can move into.

2. A plan once established requires constant review and reappraisal. Few things can be as disastrous in business as staying with an objective or plan once it has become obsolete or unsuccessful; or conversely, abandoning long-range goals with temporary shifts in circumstance or business conditions can be quite wasteful. To successfully operate under a long-range plan requires shrewd, objective appraisal of changing conditions and timely, well-conceived modifications in the plan as time progresses.

Some Tools and Techniques Used in Long-Range Planning

Long-range planning does not require any specific tools with which most companies are not already familiar and have readily available. They include all of the budget and forecasting techniques commonly used, both operating and capital. They include

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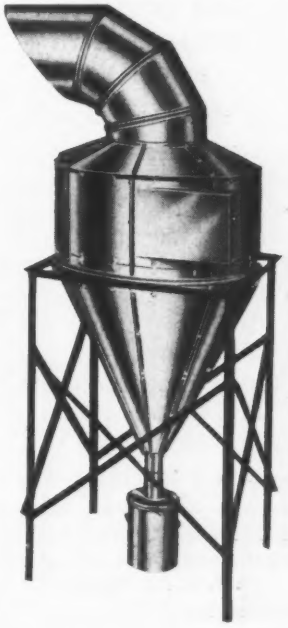

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market research, forecasting, and project lists. Long-range planning also requires considerable staff work by a variety of specialists in the course of developing specific plans for management consideration. All of these special skills are usually readily available within a business of any size.

The basic steps in company long-range planning might be outlined as follows:

ACTION		CONSIDERATIONS
Realistic Appraisal —Capabilities —Ambitions —Resources	**Forecasts**	Potential Markets Competitive Position Company Sales
Sales Goals —Budgets —Quotas —Potentials	**Marketing Plan**	Products Prices Promotion Personnel
Company Budgets —Sales —Expenses —Profits —Capital Expenditures	**Company Plan**	Organization Structure Plant Equipment Capital Manpower

Specific Projects

1. **Setting of Profit Objectives.** The first step toward a more formal approach to long-range planning would be the development of a sound goal for a company. This goal presumably could be stated in terms of a desired return on capital employed in the business.

The past record of return on capital employed can be readily computed by any company. Comparative statistics can often be obtained on your industry which would be helpful in setting a goal. Then, by exploring all possibilities for increasing volume, adding new products, liquidating unproductive assets and significant cost reduction possibilities, it should be possible to develop a long-range goal.

At this stage, the participation of several executives is desirable. Top management must definitely play an active part. Also, the executives primarily responsible for income producing activities, such as the chief executives in charge of sales, marketing, manufacturing and research. This is the group which should not only have all of the facts bearing on the various possibilities which affect future income and cost but, also, have the responsibility for implementing goals after they have been established.

2. **Establishing a Specific Plan.** The next step would be the more detailed exploration of the specific steps which are necessary to move from where you are now to where you think you should and can be approximately five years from now. This would include realistic, objective appraisals, estimates, and forecasts on such factors as:

New Product development or improvement of present products; forecast of market for present products; domestic and foreign competition; plant location and improvement; cost reduction; equipment improvement; diversification acquisitions; capital requirements to meet profit plan; liquidation of nonprofitable assets or activities; organization planning to meet profit plan.

This step presumably could be handled with smaller groups. Again, the executives involved should participate fully. The natural groupings for your company will no doubt readily suggest themselves. A few difficulties which others have encountered might be mentioned at this point.

A. Many executives attempt to establish rather easy goals for themselves. This is a natural tendency, particularly when compensation is connected with meeting pre-established goals. Overcoming this problem is one of the arts of top management since the superior must be perceptive to this tendency when it appears and be adept in overcoming it.

B. Every effort should be made to pin down the four specific questions: What will be done? Who will do it? When will it be done? Dollar estimates?

C. This stage in the development of a long-range plan also requires the top executive or executives undertaking its guidance to stimulate the imagination of the subordinate in many cases. With some people, this is not a problem; with others, there is a tendency to assume that everything is already as good as it possibly can be in this best of all possible worlds.

3. **Pulling the Plan Together.** The final stage consists of pulling the plan together. After all detailed plans have been worked out in sufficient detail, three major schedules are prepared as

(Continued on page 60)

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Bristol, Connecticut

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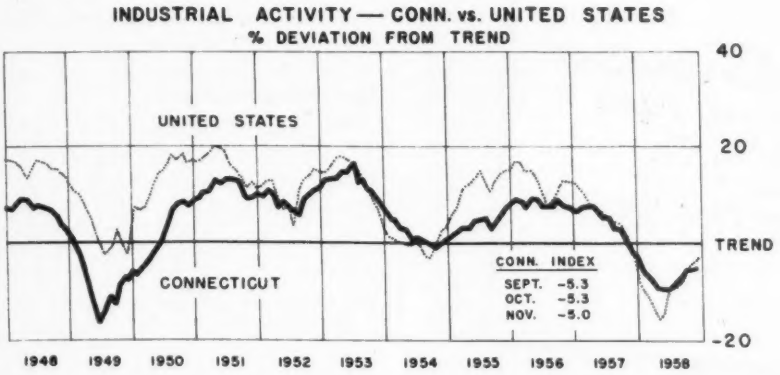
Business Pattern

A comprehensive summary of the ups and downs of industrial activity in Connecticut for the thirty day period ending on the 15th day of the second previous month.

Economy Inches Up In November



♦ THE Index of Industrial Activity moved up fractionally in November to 5.0% below trend, resuming its upward movement after a short interval of hesitancy.

With the settlement of strikes in several industries, manufacturing employment advanced for the third straight month.

Average hours worked moved up to the best level in fourteen months, and electric power sales crossed trend for the first time in a year. Construction employment was the only component to show a decline, falling off for the third successive month.

Seven consecutive months of increasing activity high-light the National scene as the U.S. index moved up to 3.0% below trend in November. This was the highest point for the index in a year.

A sharp jump in auto production contributed materially to the rise.

Connecticut Sales Tax

During the first 9 months of 1958, sales tax revenues were off 10% from a year ago. However, in the 3rd quarter of 1958 the normal seasonal pattern was resumed, and sales tax receipts were only 3½% below last year.

With the more favorable economic conditions now prevailing, it is very likely that 4th quarter revenues will follow the pattern of the years 1955-56 and exceed the last quarter level of 1957.

Personal Income

In the eleven months reported so far for 1958, personal income has moved from a low in February of $346.4 billion to a record high of $360 billion in November. The slight drop in October was due solely to the losses in wages occurring because of strikes.

The rise of $13.6 billion from the February low resulted mainly from higher wage disbursements and transfer payments such as social security and unemployment benefits.

Gross National Product

Total output in the third quarter recovered to an annual rate of $439 billion. This is only 1½% below the peak rate of $446 billion reached in the like quarter of 1957. The rise in the last two quarters was mostly in physical volume as prices held nearly level.

Several factors have contributed to the improvement. The rate of inventory liquidation has been slowing each month, and consumer demand for finished goods has been advancing steadily.

New peaks have been reached in the third quarter by three of the components of GNP. Demand for nondurable goods and services as well as government purchases have moved up steadily through the year.

Investments by producers in new plant and equipment and demand in the new car markets, both of which

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ELECTROGRAPHIC CORPORATION

had dipped noticeably in the 1st half of 1958, showed some tendency to firm in the third quarter.

With 1959 auto production now at a high level in the light of improving demand, the 4th quarter figure for GNP may well establish a new high.

Industrial Production

The Index of Industrial Production moved up 3 points in November to 141, exceeding the like month of 1957 for the first time this year. Major advances in auto production sparked the rise.

Unemployment

Continued improvement in Connecticut's unemployment situation has occurred since last June when the unemployed totaled 107,000. The most recent figures released by the Connecticut Labor Department showed 73,000 persons, or about 7% of the labor force, still unemployed in November.

Hirings in the manufacturing industries have played an important part in the reduction, as over 25,000 workers have been added to factory payrolls since mid-year. Also, more recently, the effects of Christmas retail trade hirings have been apparent.

In the period from mid-October to mid-November, unemployment decreased in twelve of the eighteen labor market areas in the state. Two other areas held even, while the remaining four areas slipped only fractionally from the previous months' figures.

Bristol, with the greatest degree of unemployment in June, has shown the largest proportionate reduction.

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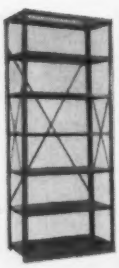

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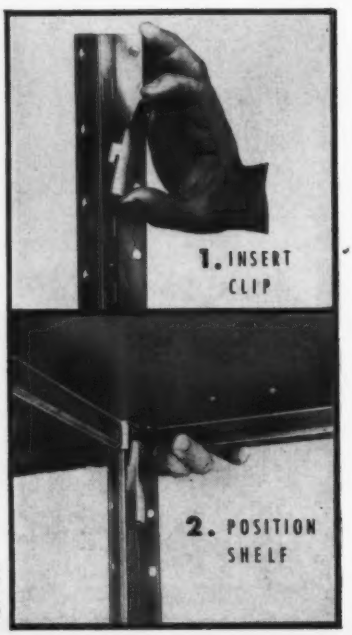

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Business Tips

By Zenon S. Malinowski
Associate Professor of Marketing
School of Business Administration, University of Connecticut

Cost-of-Capital—A Tool of Management

♦ **Meaning of Cost-of-Capital.** Cost-of-capital is sometimes referred to as rate-of-return or productivity of capital. It is the annual rate-of-return that induces investors to invest or to retain their investment in a company. As such, it is a measure of the value or cost of money to that particular company.

For managerial purposes, it is the capital cost of the future which is important since managerial applications pertain to future capital investments.

Measurement of Cost-of-Capital. The measurement of a company's cost-of-capital is complex. Several of the concepts involved in the following exposition are controversial—especially among professionals. Much of the controversy however has been expressed in the journals.

There are four principal sources of funds for capital investment projects: Debt, common stock, preferred stock, and retained cash earnings including depreciation allowances.

The cost of debt capital which is publicly placed is indicated by the market yield after adjustment for the costs of floating the securities and after adjustment for income tax effects. The cost of privately-placed debt and long-term leases must be approximated by comparisons. For several large companies in the early 1950's, the after-tax cost of debt capital was in the neighborhood of 2%.

The cost of common stock capital is measured by the relation of *anticipated* earnings per share to the *net proceeds* per share from a new stock offering. The level and trend of past earnings and price ratios provide a basis for estimation. Underpricing necessary to effect a successful stock issue, underwriters' commissions, and corporate flotation costs must be deducted from the expected market price. For these same several companies in the early 1950's, the cost of common stock capital ranged between 10% and 22%.

The cost of retained earnings (including depreciation allowances) is a real cost since retained funds must yield a rate of return to justify present prices for the common stock. The investor has the opportunity to remove his money into alternative investments. For this reason, the cost of retained earnings is frequently assumed to be equal to the cost of the common stock capital. There are conditions under which allowances for new-issue underpricing and flotation costs can still be justified in the case of retained earnings.

The cost of new capital raised through the sale of preferred stock is measured by the ratio of the annual dividend payment to the company's net proceeds from the sale. The expected market price of the stock is adjusted for underpricing and for flotation costs to obtain the net proceeds. As in the case of common stock, past levels and trends provide a basis for projection. Some estimates of the cost of preferred stock capital for large corporations in the early 1950's range from 4% to 9%.

A weighted average of these four types of capital constitutes the company's combined cost-of-capital. This weighted average is the capital cost which is most meaningful for financial managerial decisions. The weights used for combination should be the best estimates of the future proportions of each type of capital.

Managerial Uses of Cost-of-Capital. A company's cost-of-capital is a valuable practical tool in the following areas of financial management:

1. *Capital Investment Decisions.* Capital funds are for practically all companies limited. Even if they were not, however, some means of determining which proposals for capital expenditures are worthy of investment is still necessary. Too often the screening of projects is based on intuition, the authority of the sponsors, or superficial indications of benefits.

If all proposals for capital expenditures are ranked according to their anticipated rate-of-return (as determined by the discounted cash flow method described in recent issues of professional journals), relative worthiness can be determined objectively. Cost-of-capital would then provide an

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1-5 Old established company in Northeast. Recent earnings no object for company with good reputation and background. Asset value and good will recognized by buyer who will provide new products and aggressive management.

4-1 Metalworking or plastics company earning over $50,000 seeking "tax free" merger. Client small publicly owned metalworking company in New Jersey.

8-1 Sheet metal product: Vending machine; office, industrial or hospital equipment; consumer appliance etc. Client well established, modern facilities, 130,000 sq. ft and adequate working capital. Prefer strong marketing organization.

3-2 Aggressive company earning $300,000 or more seeking control through merger with publicly owned tax loss company. Client in electronics and aircraft industry with 5000 stockholders and loss of $3.0 million.

5-1 Company having strong industrial sales organization in instrumentation field to handle sales of new electronic products. Client fast growing in electronics and computer industry.

1-6 Young company with able management and good product in need of marketing help and financing.

6-2 Chemical company selling industry direct or through distributors. Price range $2.0 million.

9-1 Electrical, electro-mechanical or electronic manufacturer. Client listed on N.Y.S.E. Size no object—small or large.

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economically sound cut-off point below which no projects should be accepted since any rate-of-return below the company's cost-of-capital would impair the stockholder's position and imperil the company's long-run welfare. Even when non-economic factors or goals such as executive cliques, personalities, prestige, or sales volume dominate company policy, cost-of-capital is a valuable benchmark. It helps measure the cost of such non-economic ends.

2. *Leasing Decisions.* We have in recent years encountered increasing numbers of firms utilizing plants, stores, offices, warehouses and equipment under long-term leases or other arrangements. The important distinction between ownership and leasing should be financial and hence the decision to own or lease cannot be made properly without knowledge of the cost of the capital required by the company to effect ownership.

3. *Price and Product Line Decisions.* Because the cost of equity capital is not explicitly handled in the company's accounting or reflected by the usual cost analysis, the profitability of specific operations may be overestimated. Product and pricing decisions are cases in point. A knowledge of cost-of-capital is needed to distinguish the truly profitable operations.

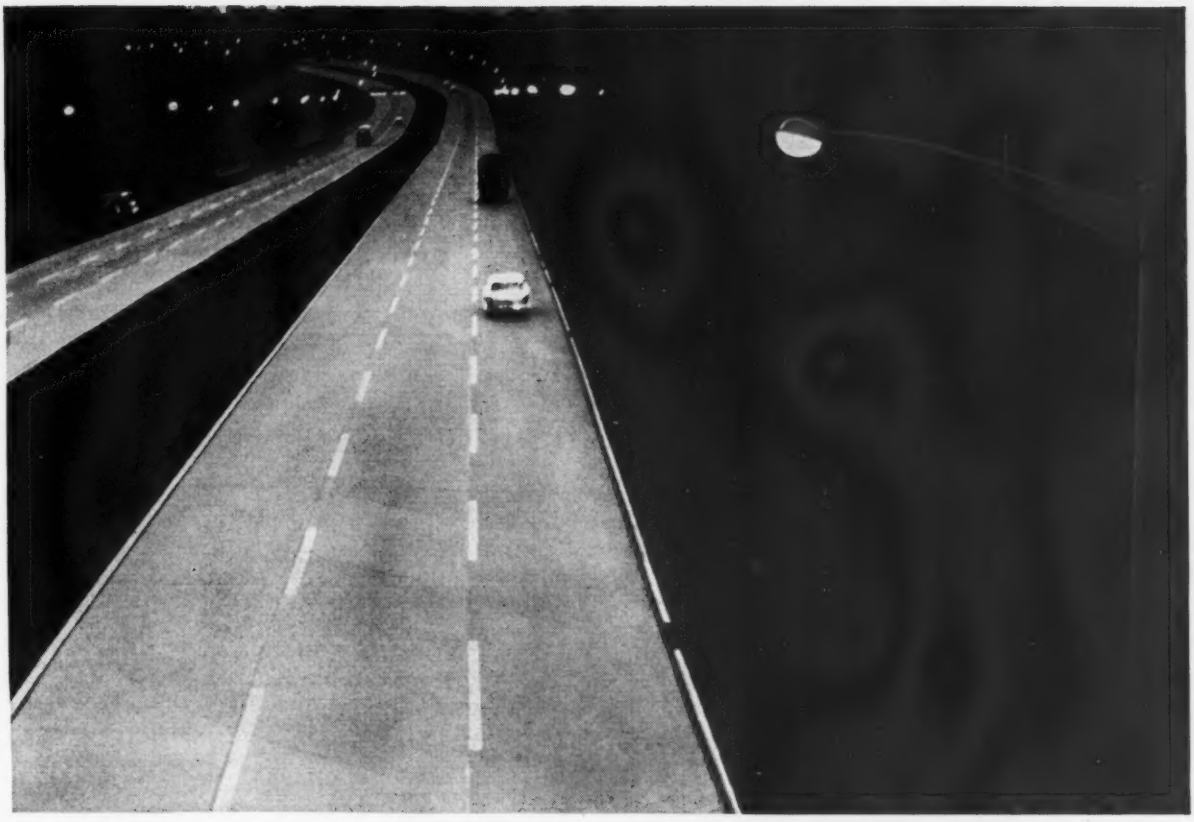
4. *Dividend Decisions.* It is inconceivable that the soundest long-run dividend policy of a company can be made without some recognition of the company's cost-of-capital. The plowback of earnings into the firm should be, in part, determined by the availability of investment opportunities whose anticipated rates of return exceed the company's cost-of-capital. Retention of earnings which cannot earn the estimated cost-of-capital to the company should be seriously questioned.

References. Because investment decisions are the most difficult and yet the most important decisions which top management has to make, it is worth a company's time and effort to develop an economic basis of determining investment worth. The following few references on the concept of cost-of-capital will help develop such a basis:

1. Dean, Joel—Capital Budgeting. Columbia University Press, New York, 1951.

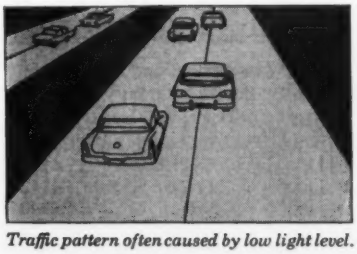
2. Dean, Joel—Measuring the Productivity of Capital. Harvard Business Review, January, 1954.

3. University of Chicago—Capital Budgeting. Journal of Business, October, 1955.

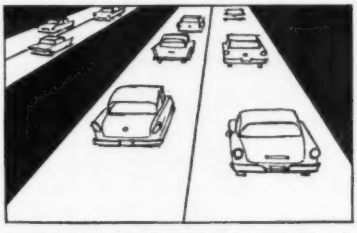


On the Connecticut Turnpike, they paved with CONCRETE

...got better night visibility at no extra cost!



Traffic pattern often caused by low light level.



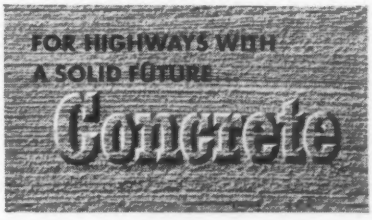
Improved traffic pattern with high light level.

Connecticut Turnpike experience shows it. On high-visibility highways, drivers pass freely, don't crowd center lines, don't string out. The traffic capacity of the highway is increased.

The world's longest lighted highway shows another big advantage you get with concrete. The extra high night-visibility level on the heavy-duty, lighted section of the Connecticut Turnpike comes from the very nature of concrete. Dark-colored pavements absorb light. Concrete reflects it.

American Standards Association recommendations for standard lighting practice show *lights are twice as effective on high reflectance surfaces, like concrete,* as on dark surfaces. You get double the light—or you can use up to 50% fewer fixtures, still get recommended lighting levels. And you cut the electric bill—up to $720 per mile per year.

And with concrete, initial cost is moderate—often lower than for other pavements when costs are based on load-carrying capacity. Maintenance cost will run as much as 60% lower than for asphalt. You get a 50-year-plus service life. Little wonder that concrete is the preferred pavement for heavy-duty roads like those on the new Interstate System.



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Are We Pricing Ourselves Out of The World Market?

(Continued from page 15)

flation, even if it meant giving up additional wage increases. People are beginning to see the problem. Let's hope enough of us can benefit by the lessons of the recent past so that we will not have to go through a much tighter wringer before corrective action is finally taken.

After all, we have everything we need to meet this problem, the talent, the intelligence, the rich resources of our nation's unparalleled industry and agriculture and raw materials. The American dream lies before us as bright and untarnished as ever. We must not let it be stung to death by the wasp of wage inflation.

Space Age Formula

(Continued from page 12)

The Systems Concept

We are confronted today with the "systems" concept. These systems are aggregations of mechanical elements: bearings, gears, pumps, levers, seals and electronic gear. Together they make up the most complex mechanisms ever devised. The necessity for this mechanical team to work together puts the problem of Reliability on the highest plane.

The systems concept contrasts sharply with what we used to call "the assembled job." Then the manufacturer simply took several units off the shelf and put them together in an assembly.

Reliability Difficult To Attain

Qualities needed for Reliability are not numerous but they are difficult to attain, especially when several rigid requirements are linked together. Temperatures far below zero are one common problem. Most low temperature problems range from 350°F. below zero on downward. Conversely high temperatures may ascend to 2000°F. Other obstacles we must overcome to insure Reliability are practically nil lubrication, severe vibration, punishing G. loadings and immunity to various nuclear radiations, cosmic rays and gamma rays. Corrosion from sea water, new fuels, liquid oxygen, nitrogen, hydrogen and violent acids raise additional hurdles.

Often ball bearings and other units in the systems are stressed highly by heavy loads. Many times weight must be reduced to a minimum; even moderate loads then work slenderized parts to the limit.

These factors all complicate Reliability yet among a related group of parts it must be high or the mission cannot succeed. Assurance is needed that the parts will not fail in many hours of operation. No. 99 44/100 percent is sufficient.

At present one of our customers is studying the design of a space vehicle to reach Mars. This journey will span 6000 hours one way. Statisticians tell us that the system must be able to operate for an average of 600,000 hours or 68 years to reduce the possibility of failure to one percent.

In another area our inspectors give more emphasis to the role of Research and Development. Formerly their shop talk revolved around micrometers and air gages. Now they speak of ultrasonics, x-ray inspection, radioactive tests and measurements in millionths of an inch.

Our metallurgists use terms such as vacuum melting of steel, vacuum arc remelting, duplex melting, zone refining and vacuum casting.

Engineers in our plant might be overheard discussing our old friend Isaac Newton and whether some of his procedures can be programmed into the mammoth new computers. Their conversation would be studded with words like Weibull, matrix, isoelasticity, heat dams, thermal shock, heat flow and creep.

This talk is part of the everyday Research and Development plus Reliability at Fafnir Bearing.

$160 Billion For Research

In the seven fiscal years prior to June 30, 1957 the government awarded research contracts totaling nearly 160 billion dollars. Much of this went into research on atomic subs, missiles, planes and their accessories. Specifically let's mention the Nautilus and Sea Wolf, the Atlas and Matador missiles, and the B-52 jet bomber.

These products and others like them use ball bearings. Supplying the right bearings for these applications meant changes in many familiar patterns. Under the spur of Research and Development we have overcome many barriers erected by weight, size and temperature. In the process new horizons have opened up in materials, production methods, metallurgy and engineering.

The following quotation aptly sums up why Research, Development and Reliability today occupy so vital a place:

"Tomorrow has arrived a little sooner than most of us expected. Technological advances have sped up the pace of our lives and complicated even the most commonplace functions. As a result, troubles, even the little ones, are becoming frightfully expensive."

As machines go faster and higher, as numbers grow larger, little things like ball bearings assume critical importance. At Fafnir a corps of experienced bearing makers is dedicated to producing ball bearings as efficient and reliable as modern technology can make them.

Perhaps their creed can best be expressed by paraphrasing the famous words of a World War I French marshal. He said: "They shall not pass." We say: "They shall not fail."

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Underwood Corporation — Bridgeport

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Polymer Industries Inc — Springdale
Raybestos Division Raybestos-Manhattan Inc — Bridgeport

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Lockwood Sons Inc Wm H — Hartford

Advertising Plates
Lockwood Sons Inc Wm H — Hartford

Advertising Specialties
H C Cook Co The — Ansonia

Aerosol Products
Bridgeport Brass Company — Bridgeport

Air Compressors
Spencer Turbine Co The — Hartford

Air-Conditioning
Dunham-Bush Inc — West Hartford
Norwalk Airconditioning Corp — South Norwalk

Air Ducts
Wiremold Co The (Retractable) — Hartford

Air Heaters—Direct Fired
Peabody Engineering Corporation — Stamford

Air Impellers
The Torrington Manufacturing Co — Torrington

Aircraft
Sikorsky Aircraft Division United Aircraft Corporation (helicopters) — Bridgeport

Aircraft Accessories
Chandler Evans Div Pratt & Whitney Co Inc (Piston and Jet Engine Accessories—Carburetors, Fuel Controls, Afterburner Regulators, Pumps, Servomechanisms and Protek Plugs) — West Hartford
Consolidated Controls Corp — Bethel
Fenn Mfg Co The (Hardened and Ground Gear assemblies) — Newington
Gabb Special Products Inc (filler caps—pressure fuel servicing systems) — Windsor Locks
Hamilton Standard Div United Aircraft Corp (propellors and other aircraft equipment) — Windsor Locks

Aircraft Engine Timing Tools
Gabb Special Products Inc — Windsor Locks

Aircraft Engine Details
Hartford Machine Screw Co Div of Standard Screw Co — Hartford

Aircraft Engines
Lycoming Division Avco Canufacturing Corp — Stratford
Pratt & Whitney Aircraft Div United Aircraft Corp (aircraft) — East Hartford

Aircraft Fasteners
Bland Buner Co The Thread Products Div — Hartford
Hartford Machine Screw Co Div of Standard Screw Co — Hartford
Scovill Manufacturing Company (PANELOC Aircraft Fasteners) — Waterbury

Aircraft Instruments
Gorn Electric Company Inc — Stamford

Aircraft—Repair & Overhaul
Airport Department Pratt & Whitney Aircraft Division Rentschler Field — East Hartford

Aircraft Studs and Bolts
Hartford Machine Screw Co Div of Standard Screw Co. — Hartford

Aircraft Test Equipment
United Manufacturing Co Division of The W L Maxson Corp — Hamden

Alumilite Aluminum Sheets
Leed Co The H A — Hamden

Aluminum Bronze Castings
Knapp Foundry Company Inc — Guilford

Aluminum Castings
Eastern Malleable Iron Company The — Naugatuck
Newton-New Haven Co — West Haven

Aluminum Die Castings
Mt Vernon Die Casting Corporation — Stamford
Stewart Die Casting Div. Stewart-Warner Corp. — Bridgeport

Aluminum Extrusions
Bridgeport Brass Company — Bridgeport

Aluminum Forgings
Bridgeport Brass Company — Bridgeport
Consolidated Industries Inc — West Cheshire
Scovill Manufacturing Company — Waterbury

Aluminum Ingots
Lapides Metals Corp — New Haven

Aluminum Sand Castings
Bridgeport Deoxidized Bronze Corp — Bridgeport

Aluminum—Sheet and Rod
Scovill Manufacturing Company — Waterbury

Aluminum—Sheets & Coils
United Smelting & Aluminum Co Inc — New Haven

Ammunition
Arms and Ammunition Div Olin Mathieson Chemical Corp — New Haven

Anodic Coating
Fenn Mfg Co The (Dow 17) — Newington

Anodizing
Aluminum Finishing Co. — Bridgeport
Comco Inc Div of Enthone Inc — New Haven
Leed Co The H A — Hamden

Anodizing Equipment
Comco Inc Div of Enthone Inc — New Haven

Asbestos
Auburn Manufacturing Company The (gaskets, packings, wicks) — Middletown

Asarcon Bronze
Derby Castings Company, The — Seymour
Knapp Foundry Company Inc (bushing & bearing stock) — Guilford

Assemblies—Small
Barnes Co The Wallace Div Associated Spring Corp — Bristol
Greist Manufacturing Co The — New Haven
Hartford Machine Screw Co Div of Standard Screw Co — Hartford
Stanley Humason Inc — Forestville
J H Sessions & Son — Bristol

Audio-Visual Equipment
Victor Animatograph Corp a div of Kalart (16mm sound and silent projectors; 35mm filmstrip and sound slide film projectors) — Plainville

Automatic Buffing & Polishing Machines
Harper Buffing Machine Company The — East Hampton

Auto Cable Housing
Wiremold Company The — Hartford

Automatic Assembly Machines
Sperry Products Inc — Danbury

Automatic Control Instruments
Bristol Co The (temperature, pressure, flow, humidity, time) — Waterbury

Automobiles—Children's
Powercar Company — Mystic

Automotive Bodies
Metropolitan Body Company — Bridgeport

Automotive Parts
Bridgeport Thermostat Div Robertshaw—Fulton Controls Co (automobile thermostats) — Milford
Eis Manufacturing Co (Hydraulic and Mechanical) — Middletown
Raybestos Division of Raybestos-Manhattan Inc (Brake Lining, Lined Brake Shoes, Clutch Facings, Automatic Transmission Parts, Fan Belts, Radiator Hose and Miscellaneous Rubber) — Bridgeport

Automotive & Service Station Equipment
Scovill Manufacturing Company (Canned Oil Dispensers) — Waterbury

Automotive Tools
Eis Manufacturing Company — Middletown

Bag Sealing Machines
Derby Sealers Inc — Derby

Bags—Paper
Continental Can Co Paper Container Div — Kensington

Bakelite Moldings
Watertown Mfg Co The — Watertown

Balls
Abbott Ball Co The (steel bearing and burnishing) — Hartford
Hartford Steel Ball Co The (steel bearing and burnishing, brass, bronze, monel, stainless aluminum) — Hartford
Kilian Steel Ball Corp The — Hartford
Pioneer Steel Ball Company Inc (steel for bearings, burnishing, graining; also brass, bronze and stainless) — Unionville
Superior Steel Ball Co Inc (steel bearings & burnishing material) — New Britain

Banbury Mixers
Farrel-Birmingham Company Inc — Ansonia

Barrels
Abbott Ball Co The (burnishing and tumbling) — Hartford
Esbec Barrel Finishing Corp (burnishing & tumbling) — Byram
Hartford-Steel Ball Co The (tumbling) — Hartford
King Co Alfred B (tumbling and plating) — North Haven

Baskets—Wire
Rolock Inc — Fairfield

Bearings
Barden Corporation The (ball) — Danbury
Fafnir Bearing Co (ball) — New Britain
Marlin-Rockwell Corporation — Plainville
New Departure Div of General Motors (ball) — Bristol
Norma-Hoffman Bearings Corp (ball and roller) — Stamford

Bellows Assemblies
Bridgeport Thermostat Div Robertshaw—Fulton Controls Co — Milford

Bellows—Metallic
Bridgeport Thermostat Div Robertshaw—Fulton Controls Co — Milford

Bells
Bevin Brothers Mfg Co — East Hampton
N N Hill Brass Co The — East Hampton

Belt Fasteners
Saling Manufacturing Company (patented self-aligning) — Unionville

Belting
Hartford Belting Co — Hartford
Russell Mfg Co (High Speed Endless, Laminated Rubber, Roll Stock all types) — Middletown

Bends—Pipe or Tube
National Pipe Bending Co The — New Haven

Bicycle Coaster Brakes
New Departure Div General Motors Corp — Bristol

Bicycle Sundries
New Departure Div General Motors Corp — Bristol

Blacking Salts for Metals
Enthone Inc — New Haven
Mitchell-Bradford Chemical Co — Milford

Black Oxide Finishing
Black Oxide Inc — New Britain

Black Oxide Treatment
Bennett Metal Treating Co The — Elmwood

Blades
Capewell Manufacturing Company Metal Saw Division (hack saw and band saw) — Hartford

Blocks
Howard Company (cupola fire clay) — New Haven

Blower Fans
Colonial Blower Company — Plainville
Spencer Turbine Co The — Hartford

(Advt.)

Blower Systems
Colonial Blower Company Plainville
Ripley Co Middletown

Blower Wheels
Torrington Manufacturing Company The Torrington

Blueprints and Photostats
Joseph Merritt & Co Hartford

Boilers
Bigelow Co The New Haven

Bolts and Nuts
Clark Brothers Bolt Co Milldale

Boring Tools
Atrax Company The (solid carbide) Newington

Box Board
Bird & Son Inc New Britain
Continental Can Co., Boxboard and Folding Carton Division Montville
Federal Paper Board Co Inc Montville, New Haven & Versailles
Lydall & Foulds Paper Co The Manchester
New Haven Board & Carton Co The New Haven
Robertson Paper Box Co Montville

Boxes
Bird & Son Inc (corrugated, solid fibre, cleated containers) New Britain
Connecticut Container Corporation New Haven
Continental Can Co., Fibre Drum and Corrugated Box Division Portland
Merriam Mfg Co (steel cash, bond, security, fitted tool and tackle boxes) Durham
Middletown Mfg Co (metal) Middletown
Warner Bros Co The (Acetate, Paper, Acetate and Paper Combinations, Counter Display, Setup) Bridgeport

Boxes and Crates
City Lumber Co of Bridgeport Inc The Bridgeport

Boxes—Folding
Leshine Carton Co Branford

Boxes—Metal
Merriam Mfg Co (Bond and Security, Cash and Utility, Personal Files and Drawer Safes) Durham
Scovill Manufacturing Company (aluminum, brass, bronze, copper-cosmetic, drug, hair pin, ointment, pill, powder, rouge, vanity) Waterbury

Boxes—Paper—Folding
Atlantic Carton Corp Norwich
Bridgeport Paper Box Co Bridgeport
Carpenter-Hayes Paper Box Co Inc East Hampton
Continental Can Co., Boxboard and Folding Carton Division Montville
Curtis & Sons Inc S Sandy Hook
Folding Cartons Incorporated (paper, folding) Versailles
Mills Inc H J Bristol
National Folding Box Co Div Federal Paper Board Co Inc (paper folding) New Haven and Versailles
New Haven Board & Carton Co The New Haven
Robertson Paper Box Co Montville
Warner Bros Co The Bridgeport

Boxes—Paper—Setup
Bridgeport Paper Box Co Bridgeport
Heminway Corporation The Waterbury
Mills Inc H J Bristol
Strouse Adler Company The New Haven
Warner Bros Co The Bridgeport

Brake Cables
Eis Manufacturing Co Middletown

Brake Linings
Raybestos Division of Raybestos-Manhattan Inc (Automotive and Industrial) Bridgeport
Russell Mfg Co (all types, Fused Fabric, Durak, Wireback, Extruded) Middletown

Brake Service Parts
Eis Manufacturing Co Middletown

Brass & Bronze
American Brass Co The (sheet, wire, rods, tubes) Waterbury
Bridgeport Rolling Mills Company (coil, sheet, strip) Bridgeport
Bridgeport Brass Company (sheet, rod, wire and tubing) Bridgeport
Bristol Brass Corp The (sheet, wire, rods) Bristol
Chase Brass & Copper Co Waterbury
Miller Company The (phosphor bronze and brass in sheets, strips, rolls) Meriden
Plume & Atwood Mfg Co The (sheet, wire, rod) Thomaston
Scovill Manufacturing Company Waterbury
Seymour Mfg Co The (strip, sheet & wire) Seymour
Tinsheet Metals Co The (sheets and rolls) Waterbury
Western Brass Mills Division of Olin Industries Inc (sheet, strip) New Haven

Brass & Bronze Ingot Metal
Mitchell Smelting & Refining Co Inc Botsford
Plume & Atwood Mfg Co The Thomaston
Whipple and Choate Company The Bridgeport

Brass, Bronze, Aluminum Castings
Derby Castings Company, The Seymour
Victors Brass Foundry Inc Guilford

Brass Goods
American Brass Company The Waterbury
Plume & Atwood Mfg Co The (to order) Waterbury
Rostand Mfg Co. The (Ecclesiastical Brass Wares) Milford
Scovill Manufacturing Company (to order) Waterbury
Western Brass Mills Div Olin Mathieson Chemical Corp New Haven

Brass Mill Products
American Brass Company The Waterbury
Bridgeport Brass Co Bridgeport
Chase Brass & Copper Co Waterbury
Plume & Atwood Mfg Co The Thomaston
Scovill Manufacturing Company Waterbury
Western Brass Mills Div Olin Mathieson Chemical Corp New Haven

Brick-Building
Donnelly Brick Co The New Britain

Bricks—Fire
Howard Company New Haven
Mullite Works Refractories Div H. K. Porter Co Inc Shelton

Bright Wire Goods
Sargent & Company (Screw Eyes, Screw Hooks, Cup Hooks, Hooks and Eyes, C H Hooks) New Haven

Broaching
Hartford Special Machinery Co The Hartford

Bronze & Aluminum Castings
Knapp Foundry Company Inc (rough or machined) Guilford

Bronze Sand Castings
Bridgeport Deoxidized Bronze Corp Bridgeport

Brooms—Brushes
Fuller Brush Co The Hartford

Buckles
B Schwanda & Sons .. Staffordville
Hawie Mfg Co The Bridgeport
North & Judd Manufacturing Co. New Britain
Patent Button Co The Waterbury
Risdon Manufacturing Co John M. Russell Div Naugatuck

Buffing & Polishing Compositions
Apothecaries Hall Company Division
The Hubbard Hall Chemical Company Waterbury
Lea Mfg Co Waterbury

Building Materials
City Lumber Co of Bridgeport Inc Bridgeport

Burners
Plume & Atwood Mfg Co The (kerosene oil lighting) Thomaston

Burners—Automatic
Peabody Engineering Corporation Stamford

Burners—Coal and Oil
Peabody Engineering Corporation (Combined) Stamford

Burners—Gas
Peabody Engineering Corporation (Blast Furnace) Stamford

Burners—Gas and Oil
Peabody Engineering Corporation (Combined) Stamford

Burners—Refinery
Peabody Engineering Corporation (For Gas and Oil) Stamford

Burnishing
Abbott Ball Co The (Burnishing Barrels and Burnishing Media) Hartford
Pioneer Steel Ball Company Inc (balls, cones, other metallic shapes) Unionville

Burs
Atrax Company The (carbide) Newington
Pratt & Whitney Co Inc West Hartford

Busways
Distribution Assemblies Department General Electric Co Plainville

Buttons
B Schwanda & Sons Staffordville
Frank Parizek Manufacturing Co The Putnam
Patent Button Co The Waterbury
Scovill Manufacturing Company (Uniform and Tack Fasteners) Waterbury
Waterbury Companies Inc (Uniform and Fancy Dress) Waterbury

Cabinet Work
Hartford Builders Finish Co Hartford

Cable—Asbestos Insulated
Rockbestos Products Corp New Haven

Cable-Interlocked Armor
General Electric Company Bridgeport

Cable—Nonmetallic Sheathed
General Electric Company Bridgeport

Cable—Service Entrance
General Electric Company Bridgeport

Cages
Andrew B. Hendryx Co The (bird and animal) New Haven

Cams
American Cam Company Inc Hartford
Hartford Special Machinery Co The Hartford
Rowbottom Machine Company Inc Waterbury

Cams, 2 Dimensional
Mallory Industries, Inc West Hartford
Parker-Hartford Corporation Hartford

Cams, 3 Dimensional
Mallory Industries, Inc West Hartford
Parker-Hartford Corporation Hartford

Canvas Products
F B Skiff Inc Hartford

Capacitors
Electro Motive Mfg Co Inc. The (mica & trimmer) Willimantic

Carbide Drawing Dies
State Products Co (eyelet special shape dies) Oakville

Carbide Shape Dies
Thomaston Tool & Die Co (any form) Thomaston

Carbide Tools
Atrax Company The (solid) Newington
Precision Tool & Die Co Waterbury

Carbon Pile Type Resistors
Engineered Metals Manchester

Card Clothing
Standard Card Clothing Co The (for textile mills) Stafford Springs

Card Indexes
Wassell Organization Inc Westport

Carpenter's Tools
Sargent & Company (Planes, Squares, Plumb Bobs, Bench Screws, Clamps and Saw Vices) New Haven

Carpets and Rugs
Bigelow-Sanford Carpet Co Thompsonville

Carton Closure Equipment
Better Packages Inc ("Tape-O-Matic," "Better Pack") Shelton

Casters
Bassick Company The (Industrial and General) Bridgeport

Castings
Connecticut Foundry Co (grey iron) Rocky Hill
Connecticut Malleable Castings Co. (malleable (iron castings) New Haven
Ductile Iron Foundry Inc Stratford
Eastern Malleable Iron Company The (malleable iron, metal and alloy) Naugatuck
Farrel-Birmingham Company Inc (Meehanite Nodular, Iron, Steel) Ansonia
H R Engineering Laboratories Inc (centrifugal, steel mold) East Haddam
Hartford Electric Steel Corp The (carbon, low alloy and stainless steel castings) Hartford
Malleable Iron Fittings Co (malleable iron and steel) Branford
McLagon Foundry Co. (grey iron) New Haven
Newton-New Haven Co (zinc and aluminum) West Haven
Nutmeg Crucible Steel Co (steel) Branford
Plainville Casting Company (gray, alloy and high tensile irons) Plainville
Producto Machine Company The Bridgeport
Sako Aluminum Castings Inc Fairfield
Scovill Manufacturing Company (Brass & Bronze) Waterbury
Turner & Seymour Mfg Co The (gray iron, semi steel and alloy) Torrington
Union Mfg Co (grey iron & semi steel New Britain
Waterbury Foundry Company The (highway & sash weights) Waterbury
Wilcox Crittenden & Co Inc (gray iron and brass) Middletown

(Advt.)

Castings—Investment
Arwood Precision Casting Corp — Groton

Cements—Refractory
Mullite Works Refractories Div H K Porter Co Inc — Shelton

Centerless Grinding
Brown Manufacturing Co. — New Britain
Winsted Centerless Co — Winsted

Centers
Ready Tool Co The (anti friction, carbide tipped, high speed) — Stratford

Centrifugal Pumps
Hamco Inc (gasoline or electric driven) — New Haven

Cermets
Russell Mfg Co (for missiles, and for friction materials) — Middletown

Chain
Risdon Manufacturing Co John M Russel Div — Naugatuck
Turner and Seymour Mfg Co The (weldless, sash, jack, safety, furnace, universal, lion and cable) — Torrington

Chain—Bead
Auto-Swage Products Inc — Shelton
Bead Chain Mfg Co The — Bridgeport

Chain—Power Transmission and Conveying
Whitney Chain Company — Hartford

Chairs
The Hitchcock Chair Company — Riverton

Chemical Manufacturing
Carwin Company The — North Haven

Chemicals
Apothecaries Hall Company Division The Hubbard Hall Chemical Company — Waterbury
Axton-Cross Co — Shelton
Carwin Company The — North Haven
Macalaster Bicknell Company — New Haven
MacDermid Incorporated — Waterbury
Naugatuck Chemical Division United States Rubber Co — Naugatuck
New England Lime Company — Canaan
Pfizer & Co Inc Chas — Groton
United States Chemical Corp (maintenance and powdered hand soap, floor waxes, cleaners, disinfectants, fuel additives) — New Haven

Chemicals—Agriculture
Naugatuck Chemical Division United States Rubber Co (insecticides, fungicides, weed killers) — Naugatuck

Chemists—Analytical and Consulting
Bridgeport Testing Laboratory Inc — Bridgeport

Christmas Light Clips
Foursome Manufacturing Co — Bristol

Chromium Plating
Chromium Corp of America — Waterbury
Chromium Process Company The — Shelton

Chucks
Cushman Chuck Co The — Hartford
Jacobs Manufacturing Co The — West Hartford
Union Manufacturing Company — New Britain

Chucks—Drill
Jacobs Manufacturing Co The — West Hartford

Chucks & Face Plate Jaws
Cushman Chuck Co The — Hartford
Union Mfg Co — New Britain

Chucks—Power Operated
Cushman Chuck Co The — Hartford
Union Manufacturing Company — New Britain

Circuit Breakers
Circuit Protective Devices Dept., General Electric Co — Plainville

Clay
Howard Company (Fire Howard "B" and High Temperature Dry) — New Haven

Cleaning Compounds
Enthone Inc (Industrial) — New Haven
MacDermid Incorporated — Waterbury

Clock Mechanisms
Lux Clock Mfg Co The — Waterbury

Clocks
E Ingraham Co The — Bristol
Seth Thomas Clocks — Thomaston
United States Time Corporation The — Waterbury

Clocks—Alarm
Lux Clock Mfg Co The — Waterbury

Clocks—Automatic Cooking
Lux Clock Mfg Co The — Waterbury

Clutches
Snow-Nabstedt Gear Corp The — New Haven

Clutch Facings
Raybestos Division of Raybestos-Manhattan Inc (Molded, Woven, Semi-metallic and Full-metallic) — Bridgeport
Russell Mfg Co (rubber Shock Cord—all sizes and types) — Middletown

Coil Winding Machines
Boesch Mfg Co Inc — Danbury

Coils—Electric
Bittermann Electric Company — Canaan

Coils—Pipe or Tube
National Pipe Bending Co The — New Haven
Whitlock Manufacturing Co The — Hartford

Cold Molded Electrical Insulation
Meriden Molded Plastics — Meriden

Commercial Heat Treating
A F Holden Company The — West Haven

Commercial Truck Bodies
King Co Alfred B — North Haven
Metropolitan Body Company — Bridgeport

Compacts
Scovill Manufacturing Company (powder and rouge) — Waterbury

Comparators
Pratt & Whitney Co Inc (Electro-limit and Air-O-Limit) — West Hartford

Compressors
Norwalk Company Inc (high pressure air and gas) — South Norwalk

Computers
Reflectone Corporation The — Stamford

Concrete Products
Plasticrete Corp — Hamden

Condenser and Heat Exchanger Tubes
Bridgeport Brass Company — Bridgeport
Scovill Manufacturing Company — Waterbury

Cones
Sonoco Products Co (Climax-Lowell Div.) (Paper) — Mystic

Connector
Gorn Electric Co Inc (precision miniature electrical and printed circuit) — Stamford

Consulting Engineers
McNeal J D (Electrical and Electronic) — New Haven
Stanley P. Rockwell Co Inc The (Consulting) — Hartford

Continuous Mill Gages
Pratt & Whitney Co Inc — West Hartford

Contract Machining
Laurel Mfg Co Inc (Precision Production Small Parts) — Plainville
Malleable Iron Fittings Company — Branford

Contract Manufacturers
Fenn Mfg Co The (Precision Machine Work) — Newington
Greist Mfg Co The (metal parts and assemblies) — New Haven
Hartford Machine Screw Co Div of Standard Screw Co — Hartford
Merriam Mfg Co (production runs—metal boxes and containers to specifications) — Durham
Plume & Atwood Mfg Co The (metal parts and assemblies) — Thomaston
Scovill Manufacturing Company (metal parts and assemblies) — Waterbury
J H Sessions & Son — Bristol

Controllers
Bristol Company The — Waterbury
Manning Maxwell & Moore Inc — Stratford

Controls—Remote
Panish Controls (Remote Controls for Marine & Aeronautic Applications) — Bridgeport

Controls—Hydraulic Remote
Sperry Products Inc — Danbury

Converters DC to AC
Electric Specialty Co — Stamford

Conveyer Systems
Hayes-Te Equipment Corp Connecticut Conveyor Division (Conveyor Co The) — East Haven
King Co Alfred B — North Haven
Production Equipment Co — Meriden

Copper
American Brass Corp The (sheet, wire, rods, tubes) — Waterbury
Bridgeport Brass Company (sheet, rod, wire and tubing) — Bridgeport
Bristol Brass Corp The (steel) — Bristol
Chase Brass & Copper Co (sheet, rod, wire tube) — Waterbury
Thinsheet Metals Co The (sheet and rolls) — Waterbury
Western Brass Mills Div Olin Mathieson Chemical Corp — New Haven

Copper Castings
Knapp Foundry Company Inc — Guilford

Copper Sand Castings
Bridgeport Deoxidized Bronze Corp — Bridgeport

Copper Sheets
American Brass Company The — Waterbury
New Haven Copper Co The — Seymour

Copper Shingles
New Haven Copper Co The — Seymour

Copperware
Bridgeport Brass Company (cooking utensils) — Bridgeport

Copper Water Tube
American Brass Company The — Waterbury
Bridgeport Brass Co — Bridgeport

Cord
Russell Mfg Co The (marine & aero shock) — Middletown

Cords—Asbestos Insulated
General Electric Company — Bridgeport

Cords—Braided
General Electric Company — Bridgeport

Cords—Heater
General Electric Company — Bridgeport

Cords—Portable
General Electric Company — Bridgeport

Cord Sets—Electric
General Electric Company — Bridgeport
Seeger-Williams Inc — Bridgeport

Cork Cots
Sonoco Products Co (Climax-Lowell Div) — Mystic

Correspondence Files
Wassell Organization Inc — Westport

Corrugated Box Manufacturers
Connecticut Container Corporation — New Haven
Corrugated Containers Inc — Hartford

Corrugated Shipping Cases
Connecticut Container Corporation — New Haven
Continental Can Co. Fibre Drum and Corrugated Box Division — Portland
D L & D Container Corp — New Haven

Cosmetic Containers
Eyelet Specialty Co The — Waterbury
Plume & Atwood Mfg Co The (metal) — Thomaston
Scovill Manufacturing Company — Waterbury

Cosmetics
J B Williams Co The — Glastonbury

Cotton and Asbestos Wicking
Bland Burner Co The — Hartford

Counting Devices
Veeder-Root Inc — Hartford

Couplings
Scovill Manufacturing Company (hose and tube) — Waterbury

Crushers
Farrel-Birmingham Company Inc (Stone and Ore) — Ansonia

Cups—Paper
Continental Can Co Paper Container Div — Kensington

Cushioning for Packaging
Gilman Brothers Co The — Gilman

Cutters
Atrax Company The (solid carbide) — Newington
Mitrametric Co The (ground pinion) — Torrington
Pratt & Whitney Co Inc (Milling Cutters all types) — West Hartford

Cutting & Creasing Rule
Bartholomew Co H J — Bristol

Decalcomanias
Sirocco Screenprints — New Haven

Deep Hole Drilling & Reaming
Hamden Deep Hole Drilling Co — Hamden

Deep Drawings
Stanley Pressed Metal — New Britain

Deep Hole Drilling & Reaming
Wilson Arms Co. — Hamden

Delayed Action Mechanism
M H Rhodes Inc — Hartford
R W Cramer Company Inc The — Centerbrook

Demineralizers
Crystal Research Laboratories — Hartford

Design
Designers for Business and Industry (product design-appearance) — New Haven

Design & Drafting Service
Smith & Winchester Mfg Co The — South Windham

Diamonds—Industrial
Parsons Diamond Products Inc — West Hartford

Dictating Machines
Dictaphone Corporation — Bridgeport
Gray Manufacturing Company The — Hartford
SoundScriber Corporation The — New Haven

Die Cast Dies
C & F Tool & Die Corp — Bridgeport

Die Castings
Newton-New Haven Co Inc — New Haven

Die Casting Dies
ABA Tool & Die Co — Manchester
Eastern Machine Screw Corp The — Truman & Barclay Sts New Haven
Weimann Bros Mfg Co. The — Derby

Die Heads—Self Opening
Eastern Machine Screw Corp The — New Haven
Geometric Tool Division, Greenfield Tap & Die Corp — New Haven

Die Polishing Machinery
Hartford Special Machinery Co The — Hartford

Die Sets
Pratt & Whitney Co Inc (Precision) — West Hartford
Producto Machine Company The — Bridgeport
Union Mfg Co (precision, steel and semi-steel) — New Britain

Die Sinkers
Pratt & Whitney Co Inc — West Hartford

Dies
Hoggson & Pettis Mfg Co The — New Haven
Mitrametric Co The (ground for gears) — Torrington
Pratt & Whitney Co Inc (Monocone and Ducone Dies) — West Hartford

Dies & Die Cutting
Douglas Co Geo M — New Haven

Dies—Steel Rule
Acme Steel Rule Die Corporation — Waterbury

Display Containers
National Folding Box Co Div Federal Paper Board Co Inc (folding paperboard) — New Haven and Versailles

Displays—Design & Production
Ad-Craft Displays, Inc. — Bloomfield
Stifel & Kufta — New Britain

Displays—Metal
Durham Mfg Co The (Designing & Mfg to customers' specifications) — Durham
Merriam Mfg Co (Contract Work to Individual Specifications) — Durham
Parsons Co Inc W A (custom designed) — Durham

Distribution Centers
Distribution Assemblies Department, General Electric Co — Plainville

Door Closers
Sargent & Company — New Haven
Yale & Towne Mfg Co The — Stamford

Doors
Bilco Co The (metal, residential and commercial) — West Haven

Dowel Pins
Allen Manufacturing Co The — Hartford
Hartford Machine Screw Co Div of Standard Screw Co — Hartford
Holo-Krome Screw Corp The — West Hartford

Drafting Accessories
Joseph Merritt & Co — Hartford

Drill Presses
Townsend Mfg Co The H P — Elmwood

Drilling Machines
Howe & Fant Inc (Turret Type) — East Norwalk
Pratt & Whitney Co Inc (Deep Hole) — West Hartford

Drilling and Tapping Machinery
Hartford Special Machinery Co The — Hartford

Drop Forgings
Atwater Mfg Co — Plantsville
Billings & Spencer Co The — Hartford
Consolidated Industries — West Cheshire
Wilcox Crittenden & Co Inc — Middletown

Druggists' Rubber Sundries
Seamless Rubber Company The — New Haven

Duplicating Machines—Automatic
Pratt & Whitney Co Inc — West Hartford

Duplicator Tables
Regent Machine Co — Bridgeport

Elastic
Russell Mfg Co (rubber shock cord—all sizes and types) — Middletown

Electric Cables
General Electric Company (for residential, commercial and industrial applications) — Bridgeport
Rockbestos Products Corp (asbestos insulated) — New Haven

Electric Cord Springs
Bristol Spring Manufacturing Co — Plainville

Electric Cords
General Electric Company — Bridgeport
Rockbestos Products Corp (asbestos insulated) — New Haven

Electric Eye Control
Ripley Company Inc — Middletown

Electric Fixture Wire
Rockbestos Products Corp (asbestos insulated) — New Haven

Electric Hand Irons
Winsted Hardware Mfg Co (trade mark "Durabilt") — Winsted

Electric Heating Elements
Hartford Element Co — Hartford

Electric Ignition Harnesses
General Electric Company — Bridgeport

Electric Insulation
Case Brothers Inc — Manchester
Stevens Paper Mills Inc The — Windsor

Electric Lighting Fixtures
Fan-Craft Mfg Co (residential, church, post lanterns) — Plainville
Plume & Atwood Mfg Co The — Thomaston
Wasley Products Inc — Plainville

Electric Motor Controls
Arrow-Hart & Hegeman Electric Co The — Hartford

Electric Motor Winding
Monarch Electric Co (3 phase industrial motors) — New Britain

Electric Motor Repair
B & J Electric Co — Ansonia

Electric Motors
Monarch Electric Co (Allis Chalmers) — New Britain

Electric Signs
Berger Sign Co — Hartford

Electric Switches
Arrow-Hart & Hegeman Electric Co The — Hartford

Electric Time Controls
Cramer Controls Corporation The — Centerbrook

Electric Underfloor Duct System
General Electric Company — Bridgeport

Electric Wire
General Electric Company — Bridgeport
Rockbestos Products Corp (asbestos insulated) — New Haven

Electric Wiring Devices
Arrow-Hart & Hegeman Electric Co The — Hartford

Electrical Appliances
Iona Manufacturing Company The — Manchester

Electrical Conduit Fittings & Grounding Specialties
Gillette-Vibber Company The — New London

Electrical Control Apparatus
Plainville Electrical Products Co The — Plainville

Electrical Controls
Monarch Electric Co (Allis Chalmers) — New Britain

Electrical Motors
Electric Specialty Co — Stamford
Iona Manufacturing Company The — Manchester
U S Electrical Motors Inc — Milford

Electrical Recorders
Bristol Co The — Waterbury

Electrical Relays and Controls
Allied Control Co — Plantsville

Electrical Switchboards
Plainville Electrical Products Co The — Plainville
Pneumatic Applications Co — Simsbury

Electrical Test Equipment
McNeal J D — New Haven

Electrical Wiring Systems
Wiremold Co The — Hartford

Electronic Parts
Patent Button Company The — Waterbury
Prentice Mfg Co The G E (stampings to customers' specifications) — Kensington
Terryville Manufacturing Co (Stampings to customer specifications) — Terryville

Electronics
Gray Manufacturing Company the — Hartford
McNeal J D — New Haven
Middletown Mfg Co (metal cabinets, chassis panels, brackets, cases) — Middletown
Ripley Co — Middletown
Sturrup Larabee & Warmers Inc — Middletown

Electroplating
Giering Metal Finishing Inc — Hamden
National Sherardizing & Machine Co — Hartford
Waterbury Plating Company — Waterbury

Electroplating—Equipment & Supplies
Apothecaries Hall Company Division — Waterbury
Comco Inc Div of Enthone Inc — New Haven
Hubbard Hall Chemical Company The — Waterbury
Lea Manufacturing Co The — Waterbury
MacDermid Incorporated — Waterbury

Electroplating Processes & Supplies
Enthone Inc — New Haven

Electrotypes
Barnum-Hayward Electrotype Co Inc — New Haven
Lockwood Sons Inc Wm H — Hartford
New Haven Electrotype Div Electrographic Corp — New Haven

Elevators
Eastern Elevator Co (passenger and freight) — New Haven
General Elevator Service Co — Hartford

Enameling
Giering Metal Finishing Inc — Hamden
Waterbury Plating Company — Waterbury

Enamels & Lacquers
Dobbs Chemical Co The (industrial finishes to customers' specifications) — New Haven

End Milling Cutters
Pratt & Whitney Co Inc — West Hartford

End Mills
Atrax Company The (solid carbide) — Newington

Engraving—Plastic and Nonferrous Metals
Salisbury Products Inc — Lakeville

Envelopes
Curtis 1000 Inc — Hartford
United States Envelope Company Hartford Division — Hartford

Envelopes—Stock and Special
Continental Can Co Paper Container Div — Kensington

Extractors—Tap
Walton Company The — West Hartford (Advt.)

Extruders and Accessories
Davis Electric Company (Ram Type Teflon Extruder) Wallingford
Standard Machinery and Davis-Standard Divisions of Franklin Research Corp Mystic

Eyelets
American Brass Company The Waterbury
Mark Eyelet & Stamping Co (small—metal stampings) Wolcott
Platt Bros & Co The Waterbury
Plume & Atwood Mfg Co The Thomaston
Scovill Manufacturing Company Waterbury
Stevens Co Inc Waterbury
Waterbury Companies Inc Waterbury

Eyelets, Ferrules and Wiring Terminals
American Brass Company The Waterbury
Waterbury Companies Inc Waterbury

Eyelet Machine Products
American Brass Company The Waterbury
Ball & Socket Mfg Co the West Cheshire
Cold Forming Mfg Co The Waterbury
Plume & Atwood Mfg Co The Thomaston
Stevens Co Inc Waterbury
Waterbury Companies Inc Waterbury

Fabricators
King Co Alfred B . North Haven
Scovill Manufacturing Company (aluminum, brass, bronze, copper, steel) Waterbury

Fabrics
Russell Mfg Co (Teflon, Moulded Fabric, Bearing Surfaces, High Temperature Fabrics) Middletown

Fan Blades
Torrington Manufacturing Company The Torrington

Fancy Dress Buttons and Buckles
Waterbury Companies Inc Waterbury

Fans—Electric
General Electric Company Bridgeport
Monarch Electric Co (attic, industrial and ventilating) New Britain

Fasteners—Aircraft
Scovill Manufacturing Company (PANELOC Aircraft Fasteners) Waterbury

Fasteners—Laundry Proof
Scoville Manufacturing Company (GRIPPER snap fasteners) Waterbury

Fasteners—Slide & Snap
G E Prentice Mfg Co Tile Kensington
Scovill Manufacturing Company (GRIPPER zippers and GRIPPER snap fasteners) Waterbury

Felt
Auburn Manufacturing Company The (mechanical, cut parts) Middletown
Drycor Felt Company (paper makers and industrial) Staffordville

Felt—All Purpose
American Felt Co (Mill & Cutting Plant) Glenville
Chas W House & Sons Inc (Mills & Cutting Plant) Unionville

Fiber-glass Fabrication
Davis Co The E J West Haven

Fibre Board
Bird & Son Inc New Britain
Case Brothers Inc Manchester
Colonial Board Company Manchester
C H Norton Co The North Westchester
Stevens Paper Mills Inc The Windsor

File Cards
Standard Card Clothing Co The Stafford Springs

Filing Equipment
Wassell Organization Inc Westport

Filters—Fluid
Cuno Engineering Corp The Meriden

Filters—Liquid
Alsop Engineering Corporation Milldale

Finger Nail Clippers
H C Cook Co The Ansonia

Firearms
Colt's Patent Fire Arms Mfg Co Inc Hartford
Junion Screw Machine Products Inc West Haven
Marlin Firearms Co The New Haven
O F Mossberg & Sons Inc New Haven
Arms and Ammunition Div Olin Mathieson Chemical Corp New Haven

Firearms Accessories
Poly Choke Co Inc The East Hartford

Fire Alarm Systems
Fire-Lite Alarms Inc New Haven

Fire Hose
Fabrics Fire Hose (municipal and industrial) Sandy Hook

Fireplace Goods
John P Smith Co The (screens) New Haven

Fireworks
M Backes' Sons Inc Wallingford

Fishing Tackle
H C Cook The Ansonia

Flashlights
Bridgeport Metal Goods Mfg Co Bridgeport

Flat Springs
Bristol Spring Manufacturnig Co Plainville
Gemco Manufacturing Co Inc Southington

Flexible Shaft Machines
Pratt & Whitney Co Inc West Hartford

Float Switches
Gorn Electric Co Inc (for aircraft and commerical use) Stamford

Floor & Ceiling Plates
Beaton & Cadwell Mfg Co The New Britain

Fluorescent Lighting Equipment
Fullerton Manufacturing Corp Norwalk
Vanderman Manufacturing Co The Willimantic
Wiremold Company The Hartford

Foam Rubber
Armstrong Rubber Company The West Haven

Forgings
Atwater Manufacturing Company Plantsville
Billings & Spencer Company Hartford
Capewell Manufacturing Company Hartford
Chase Brass & Copper Co Waterbury
Clark Brothers Bolt Co Milldale
Consolidated Industries Inc West Cheshire
Heppenstall Co (all kinds and shapes) Bridgeport
Scovill Manufacturing Company (Non-ferrous) Waterbury

Foundries
Connecticut Malleable Castings Co (malleable iron castings) New Haven
Derby Castings Company, The Seymour
Ductile Iron Foundry Inc Stratford
Farrel-Birmingham Company Inc (Iron and Steel) Ansonia
Hartford Electric Steel Corp The Hartford
Malleable Iron Fittings Co (Malleable Iron and Steel Castings) Branford
Plainville Casting Company (gray, alloy and high tensile irons) Plainville
Producto Machine Company The Bridgeport
Smith & Winchester Mfg Co The South Windham
Turner & Seymour Mfg Co The (gray, iron, semi steel and alloy) Torrington
Union Mfg Co (gray iron & semi steel) New Britain
Wilcox Crittenden & Co Inc (iron, brass, aluminum and bronze) Middletown

Fountain Pens and Mechanical Pencils
Waterman Pen Company Inc Seymour

Foundry Riddles
John P Smith Co The New Haven

Four Slide Forms
Peck Spring Co Plainville

Frames—Hack Saw
Thompson & Son Co The Henry G New Haven

Fuel Oil Pump and Heater Sets
Peabody Engineering Corporation Stamford

Furnaces
Norwalk Airconditioning Corp South Norwalk

Gage Blocks
Pratt & Whitney Co Inc (Alloy steel and Carbide, Hoke and USA) West Hartford

Galvanizing
Malleable Iron Fittings Co Branford
Wilcox Crittenden & Co Inc Middletown

Gaskets
Auburn Manufacturing Company The (from all materials) Middletown
Raybestos Division of Raybestos-Manhattan Inc Bridgeport

Gaskets—Insulation
American Felt Co Glenville

Gas Range Conversion Burner
Holyoke Heater Corp of Conn Inc Hartford

Gas Scrubbers, Coolers and Absorbers
Peabody Engineering Corporation Stamford

Gauges
Bristol Co The (pressure and vacuum-recording automatic control) Waterbury
Helicoid Gage Division American Chain & Cable Co The (pressure and vacuum) Bridgeport
Maning Maxwell & Moore Inc Stratford
New Haven Trap Rock Co The Machine Products Div (Johan Universal and Special Purpose Gauge) North Branford
Pratt & Whitney Co Inc (Precision Measurement all types) West Hartford

Gears
Mitrametric Co The (blanked fine pitch) Torrington

Gears and Gear Cutting
Farrel-Birmingham Company Inc Ansonia
Fenn Mfg Co The Newington
Hartford Special Machinery Co The Hartford
United Gear & Machine Co Suffield

Generators
Hameo Inc (electric, portable, gasoline driven) New Haven

Glass Bowing
Macalaster Bicknell Company New Haven

Glass Cutters
Fletcher-Terry Co The Forestville

Greeting Cards
A D Steinbach & Sons Inc New Haven

Grinding
Farrel-Birmingham Company Inc (Roll and Cylindrical) Ansonia
Hartford Special Machinery Co The (gears, threads, cams and splines) Hartford
Horberg Grinding Industries Inc (Precision custom grinding; centerless, cylindrical, surfaces, internal and special) Bridgeport

Grinding Heads—Internal
Pratt & Whitney Co Inc (Pneumatic, High Speed) West Hartford

Grinding Machines
Farrel-Birmingham Company Inc (Roll) Ansonia
Pratt & Whitney Co Inc (Surface, Die, Gear and Cutter Grinders) West Hartford
Rowbottom Machine Company Inc (cam) Waterbury

Grommets
American Brass Company The Waterbury
Plume & Atwood Mfg Co The Waterbury

Guards for Machinery
Wheeler Co The G E New Haven

Hack and Band Saw Blades
Capewell Manufacturing Co The Hartford

Hair Hygiene Preparations
Parker Herbex Corporation Stamford

Hammers—Carpenters and Machinists
Capewell Manufacturing Company Hartford

Hand Tools
Billings and Spencer Company (wrenches sockets and shop tools) Hartford
Bridgeport Hardware Mfg Corp The (screw drivers, wrenches, nail pullers, box & crate openers, pliers, saws, trowels & special forgings) Bridgeport

Hardness Testers
Wilson Mechanical Instrument Div American Chain & Cable Company Inc Bridgeport

Hardware
Bassick Company The (Automotive) Bridgeport
City Lumber Co of Bridgeport Inc Bridgeport
Gordon Associates Derby
Harlock Products Corp New Haven
Sargent & Company New Haven
Wilcox Crittenden & Co Inc (marine heavy and industrial) Middletown
Yale & Towne Mfg Co The Stamford

Hardware—Marine & Bus
Rostand Mfg Co The Milford

Hardware—Trailer Cabinet
Excelsior Hardware Co The Stamford

Hardware, Trunk & Luggage
Corbin Cabinet Lock Div American Hardware Corp New Britain
J H Sessions & Son Bristol
Yale & Towne Mfg Co The Stamford

Hat Machinery
Doran Bros Inc Danbury

Health Surgical & Orthopedic Supports
Berger Brothers Company The (custom made for back, breast and abdomen) New Haven

Heat Elements
Electroflex Heat Inc Hartford
Safeway Heat Elements Inc (woven wire resistance type) Middletown

Heat Exchangers
Whitlock Manufacturing Co The Hartford

Heat Treating
Bennett Metal Treating Co The Elmwood
Commercial Metal Treating Co Bridgeport
New Britain-Gridley Machine Division The New Britain Machine Co New Britain
New Haven Heat Treating Co Inc New Haven
Skne Co Inc The William A (metals) Bridgeport
Stanley P Rockwell Co Inc The Hartford (Advt.)

Heat-Treating Equipment
Barnes Co The Wallace Div Associated Spring Corp Bristol
Bauer & Company Inc Hartford
Rolock Inc (Retorts, Muffles, etc) Fairfield
Stanley P Rockwell Co Inc The (commercial) Hartford

Heat Treating Fixtures
Rolock Inc (Trays, Baskets, etc.) Fairfield
Wiretex Mfg Co Inc Bridgeport

Heat Treating Salts and Compounds
Mitchell-Bradford Chemical Co Milford

Heaters—Electric
General Electric Company Bridgeport

Heating and Cooling Coils
G & O Manufacturing Co New Haven

Heating Elements
Hartford Element Co Hartford

Heavy Chemicals
Naugatuck Chemical Division United States Rubber Co (sulphuric, nitric and muriatic acids and aniline oil) Naugatuck

Heavy Machinery
Smith & Winchester Mfg Co The South Windham

Hex-Socket Screws
Allen Manufacturing Company The Hartford
Bristol Company The Waterbury
Hartford Machine Screw Co Div of Standard Screw Co Hartford
Holo-Krome Screw Corp The West Hartford

High Frequency Alternators
Electric Specialty Co Stamford

Highway Guard Rail Hardware
Malleable Iron Fittings Co Branford

Hinges
Homer D Bronson Company Beacon Falls

Hobs and Hobbings
ABA Tool & Die Co Manchester
Pratt & Whitney Co Inc (Die and Thread milling) West Hartford

Hoists and Trolleys
Union Mfg Company New Britain

Hose Fittings
Scovill Manufacturing Company Waterbury

Hose—Flexible Metallic
American Brass Co
American Metal Hose Branch Waterbury

Hose Supporter Trimmings
Hawie Mfg Co The (So-Lo Grip Tabs) Bridgeport

Hydraulic Brake Fluids
Eis Manufacturing Co Middletown

Hypodermic Needles
Roehr Products Company Waterbury

Impregnating
American Metaseal Inc (metal, wood etc.) Hamden

Industrial Chrome Plating
Mirror Polishing & Buffing Co Waterbury

Industrial Displays
Sansone Co S Frederick (Designers Builders and Counselors) Short Beach

Industrial Finishes
Chemical Coatings Corporation Rocky Hill

Inks
Waterman Pen Company Inc Seymour

Insecticides
American Cyanamid Company Waterbury

Instalment Payment Books
Wassell Organization Inc Westport

Insulated Wire & Cable
General Electric Company (for residential commercial and industrial applications) Bridgeport
Kerite Company The Seymour

Insulated Wire & Cable Machinery
Davis Electric Company Wallingford

Instruments
Bristol Company The Waterbury
J-B-T Instruments Inc New Haven
Manning Maxwell & Moore Inc Stratford
Penn Keystone Corporation Derby
Pratt & Whitney Co Inc (Precision Measuring) West Hartford

Integrators
Reflectone Corporation The Stamford

Interval Timers
Lux Clock Manufacturing Company Waterbury
Rhodes Inc M H Hartford

Jacquard
Case Brothers Inc Manchester

Japanning
H Sessions & Son Bristol

Jig Borer
Linley Brothers Company Bridgeport
Moore Special Tool Co (Moore) Bridgeport
Pratt & Whitney Co Inc West Hartford

Jigs, Fixtures & Gages
Federal Machine & Tool Co Bristol

Jig Grinder
Moore Special Tool Co (Moore) Bridgeport

Junior Automobiles
Power Car Company Mystic

Keller Machines
Pratt & Whitney Co Inc West Hartford

Key Blanks
Sargent & Company New Haven
Yale & Towne Mfg Co The Stamford

Labels
Naugatuck Chemical Division United States Rubber Co (for rubber articles) Naugatuck

Label Dispensers
Derby Sealers Inc (pressure-sensitive labels) Derby

Label Moisteners
Better Packages Inc ("Counterboy"—"Packer") Shelton
Derby Sealers Inc Derby

Laboratory Equipment
Eastern Industries Inc New Haven

Laboratory Supplies
Macalaster Bicknell Company New Haven

Laces
American Fabrics Company The Bridgeport
Wilcox Lace Corporation The Middletown

Laces and Nettings
Wilcox Lace Corporation The Middletown

Lacquers & Synthetic Enamels
Chemical Coatings Corporation Rocky Hill
I-Sis Chemicals Inc Stamford

Ladders
Flint Co A W New Haven

Laminated Metal
Bridgeport Brass Company Bridgeport

Lamps
Plume & Atwood Mfg Co The (metal oil) Waterbury

Lampholders—Incandescent and Flourescent
General Electric Company Bridgeport

Lamp Shades
Verplex Company The Essex

Lanterns—Battery Operated
Electrical Div Olin Mathieson Chemical Corp New Haven

Lathes—Hydra Feed
Bullard Co The (automatic tracer on multiple tool) Bridgeport

Lathes—Man-Au-Trol
Bullard Company The (single spindle-automatic) Bridgeport

Lathes—Multi-Au-Matic
Bullard Company The (vertical multi-spindle-indexing type) Bridgeport

Lathes—Toolroom and Automatic
Pratt & Whitney Co Inc West Hartford

Lathes—Vertical Turret
Bullard Company The (single spindle) Bridgeport

Lead Plating
Christie Plating Co The Groton

Leather
Norwich Leather Co Norwich
Herman Roser & Sons Inc (Genuine Pigskin) Glastonbury

Leather Dog Furnishings
Andrew B Hendryx Co The New Haven
The Smith-Worthington Saddlery Co Hartford

Leather Goods Trimmings
G E Prentice Mfg Co The Kensington

Leather, Mechanical
Auburn Manufacturing Company The (packings, cubs, washers, etc) Middletown

Letterheads
Lehman Brothers Inc (designers, engravers, lithographers) New Haven

Levels—Machinist's Precision
Bullard Company The Bridgeport

Lighting Accessories—Fluorescent
General Electric Company Bridgeport

Lighting Equipment
Fullerton Manufacturing Corp Norwalk
Miller Co The (Miller, Ivanhoe) Meriden

Lime
New England Lime Company Canaan

Lipstick Cases
Scovill Manufacturing Company Waterbury

Lipstick Containers
Bridgeport Metal Goods Mfg Co Bridgeport
Plume & Atwood Manufacturing Co Waterbury

Lithographers
O'Toole & Sons Inc T Stamford

Lithographing
Kellogg & Bulkeley A Division of Connecticut Printers Inc Hartford
Lehman Brothers Inc New Haven
A D Steinbach & Sons New Haven

Locks—Banks
Yale & Towne Mfg Co The Stamford

Locks—Builders
Sargent & Company New Haven
Yale & Towne Mfg Co The Stamford

Locks—Cabinet
Excelsior Hardware Co The Stamford
Yale & Towne Mfg Co The Stamford

Locks—Special Purpose
Yale & Towne Mfg Co The Stamford

Locks—Suitcase and Trimmings
Excelsior Hardware Co The Stamford

Locks—Trunk
Excelsior Hardware Co The Stamford
Yale & Towne Mfg Co The Stamford

Locks—Zipper
Excelsior Hardware Co The Stamford

Loom—Non-Metallic
Wiremold Company The Hartford

Lubricants—Extreme Temperatures
Alpha Molykote Corp Stamford

Lubricants—High Pressure
Alpha Molykote Corp Stamford

Lubricating System—Mist
Thompson & Son Co The Henry G New Haven

Lumber & Millwork Products
City Lumber Co of Bridgeport Inc Bridgeport

Machetes
Collins Company The Collinsville

Machine Design
Black Rock Mfg Company The Bridgeport

Machine Overload Monitors
Sperry Products Inc Danbury

Machine Shop Fabrication
Smith & Winchester Mfg Co The South Windham (Advt.)

Machine Tools
Bullard Company The — Bridgeport
Farrel-Birmingham Company Inc — Ansonia
Pratt & Whitney Co Inc — West Hartford
Producto Machine Company The — Bridgeport

Machine Work
Banthin Engineering Co — Bridgeport
Black Rock M'g Company The — Bridgeport
Farrel-Birmingham Company Inc — Ansonia
Fenn Manufacturing Company The (precision parts) — Newington
Fuller Brush Company The (precision contract work) — Hartford
Hartford Special Machinery Co The (contract work only) — Hartford
National Sheradizing & Machine Co. (job) — Hartford
Parker-Hartford Corporation — Hartford
Swan Tool & Machine Co The — Hartford
Torrington Manufacturing Co The (special rolling mill machinery) — Torrington

Machinery
Davis Electric Company (Wire and Cable) — Wallingford
Fenn Manufacturing Company The (special) — Newington
Hallden Machine Company The (mill) — Thomaston
Torrington Manufacturing Co The (mill) — Torrington

Machinery—Automatic
Banthin Engineering Company (new and rebuilt) — Bridgeport

Machinery—Bolt and Nut
Waterbury Farrel Foundry & Machine Co The — Waterbury

Machinery—Cold Heading
Waterbury Farrel Foundry & Machine Co The — Waterbury

Machinery Dealers & Rebuilders
Botwinik Brothers — New Haven
J L Lucas and Son — Fairfield
State Machinery Co Inc — New Haven

Machinery—Extruding
Standard Machinery and Davis-Standard Divisions of Franklin Research Corp — Mystic

Machinery—Metal-Working
Fenn Mfg Co The — Newington
Waterbury Farrel Foundry & Machine Co The — Waterbury
Pratt & Whitney Co Inc — West Hartford

Machinery—Nut
Waterbury Farrel Foundry & Machine Co The (forming and tapping) — Waterbury

Machinery—Screw and Rivet
Waterbury Farrel Foundry & Machine Co The — Waterbury

Machinery—Wire Drawing
Fenn Mfg Co The — Newington
Waterbury Farrel Foundry & Machine Co The — Waterbury

Machinery—Wire Straightening
Mettler Machine Tool Inc — New Haven

Machinery—Wire Straightening and Cutting
Mettler Machine Tool Inc — New Haven

Machines
Campbell Machine Div American Chain & Cable Co Inc (cutting & nibbling) — Bridgeport
Coulter & McKenzie Machine Co The (special, new development engineering design and construction) — Bridgeport
Patent Button Company The — Waterbury

Machines Automatic
Globe Tapping Machine Co — Bridgeport

Machines—Automatic Chucking
Bullard Company The — Bridgeport
New Britain-Gridley Machine Division The New Britain Machine Co (multiple spindle and double end) — New Britain
Pratt & Whitney Co Inc (Potter & Johnson) — West Hartford

Machines—Brushing
Fuller Brush Co The — Hartford

Machines—Contin-U-Matic
Bullard Company The (verticle multi-spindle—continuous turning) — Bridgeport

Machines—Draw Benches
Fenn Manufacturing Company The — Newington

Machines—Forming
Nilson Machine Company The A H (four-slide wire and ribbon stock) — Shelton

Machines—Paper Ruling
John McAdams & Sons Inc — Norwalk

Machines—Precision Boring
New Britain-Gridley Machine Division The New Britain Machine Co. — New Britain

Machines—Rolling
Fenn Manufacturing Company The — Newington

Machines—Slotting
Waterbury Farrel Foundry & Machine Co The (screw head) — Waterbury

Machines—Spacing Table
Bullard Company The — Bridgeport

Machines—Special
Fenn Mfg Co The — Newington
Fuller Brush Co The — Hartford

Machines—Swaging
Fenn Manufacturing Company The — Newington

Machines—Thread Rolling
Hartford Special Machinery Co The — Hartford
Peterson Division Mettler Machine Tool Inc — New Haven
Waterbury Farrel Foundry & Machine Co The — Waterbury

Machines—Turks Head
Fenn Manufacturing Company The — Newington

Machines—Wire Drawing
Fenn Manufacturing Company The — Newington

Machining—Horizontal Boring
Tucker Machine Co — New Haven

Manganese Bronze Ingot
Whipple and Choate Company — Bridgeport

Manicure Instruments
W E Bassett Company The — Derby

Marine Equipment
Wilcox-Crittenden Div North & Judd Mfg Co — Middletown

Marine Reserve Gears
Snow-Nabstedt Gear Corp The — New Haven

Marking Devices
Cooney Engraving Co — Branford
Hoggson & Pettis Mfg Co The — New Haven
Parker-Hartford Corporation (steel) — Hartford

Marking Tools
Parker-Hartford Corporation — Hartford

Materials Handling
Hayes-Te Equipment Corp Connecticut Conveyor Division (Conn-Veyor) — Unionville
Parsons Co Inc W A (tote pans) — Durham

Mats—Newspaper
Lockwood Sons Inc Wm H — Hartford

Mattresses
Waterbury Mattress Co — Waterbury

Metal Boxes
Parsons Co Inc W A (tool kits) — Durham

Metal Boxes and Displays
Durham Mfg Co The (Designing & Mfg to customers' specifications) — Durham
Merriam Mfg Co (Bond, Security, Cash, Utility, Personal Files, Drawer Safes, Custombilt containers and displays) — Durham
Middletown Mfg Co — Middletown

Metal Cleaners
Apothecarics Hall Company Division The Hubbard Hall Chemical Company — Waterbury
Enthone Inc — New Haven
MacDermid Incorporated — Waterbury

Metal Finishes
Enthone Inc — New Haven
Mitchell-Bradford Chemical Co — Milford

Metal Finishing
Hartford Industrial Finishing Co — Hartford
National Sheradizing & Machine Co — Hartford
Waterbury Plating Company — Waterbury

Metal Formings
Master Engineering Company — West Chesnire
Stanley Pressed Metal — New Britain

Metallurgists
Bridgeport Testing Laboratory Inc — Bridgeport

Metal Mouldings
Leed Co The H A — Hamden

Metal Novelties
H C Cook Co The — Ansonia

Metal Products—Stampings
American Brass Company The — Waterbury
Plume & Atwood Manufacturing Co — Thomaston
Prentice Mfg Co The G E — Kensington
J H Sessions & Son — Bristol
Scovill Manufacturing Company (Made-to-Order) — Waterbury
Stanley Pressed Metal — New Britain

Metal Specialties
Excelsior Hardware Co The — Stamford

Metal Spinning
Moseley Metal Crafts Inc — West Hartford

Metal Stampings
American Brass Company The — Waterbury
Better Formed Metals Inc — Waterbury
DooVal Tool & Mfg Inc The — Naugatuck
Excelsior Hardware Co The — Stamford
Greist Mfg Co The — New Haven
H C Cook Co The — Ansonia
Stanley Humason Inc — Forestville
Mohawk Mfg Co (threaded) — Middletown
J A Otterbein Company The (metal fabrications) — Midletown
J H Sessions & Son — Bristol
Patent Button Co The — Waterbury
G E Prentice Mfg Co The — Kensington
Plume & Atwood Mfg Co The — Thomaston
Saling Manufacturing Company — Unionville
Stanley Pressed Metal — New Britain
Swan Tool & Machine Co The — Hartford
Terryville Manufacturing Co — Terryville
Verplex Company The (Contract) — Essex
Waterbury Lock & Specialty Co The — Milford

Meters—Gas
Sprague Meter Company — Bridgeport

Meters—Parking
Rhodes Inc M H — Hartford

Microfilming
American Microfilming Service Co. — New Haven
Cine-Video Productions Inc — Milford

Milk Bottle Carriers
John P Smith Co The — New Haven

Mill Machinery
Torrington Manufacturing Company The — Torrington

Milling Machines
Pratt & Whitney Co Inc (Keller Tracer—Controlled Milling Machines) — West Hartford
Rowbottom Machine Company Inc (cam) — Waterbury

Mill Products
Scovill Manufacturing Company (aluminum, brass, bronze, nickel silver—sheet, rod, wire, tube) — Waterbury

Mill Supplies
Wilcox-Crittenden Div North & Judd Mfg Co — Middletown

Millwork
Hartford Builders Finish Co — Hartford

Miniature Precision Connectors
Gorn Electric Co — Stamford

Minute Minders
Lux Clock Mfg Co The — Waterbury

Mirror Rosettes and Hangers
Waterbury Companies Inc — Waterbury

Mixers—Liquid
Alsop Engineering Corporation — Milldale

Mixing Equipment
Easter Industries Inc — New Haven

Model Work
B & N Tool & Engineering Co (instruments and timing devices) — Thomaston

Mops
Fuller Brush Co The — Hartford

(Advt.)

Motion Picture Equipment
Victor Animatograph Corp a div of Kalart (16mm sound and silent projectors film splicers and rewinders) Plainville

Motion Pictures
Cine-Video Productions Inc Milford

Motor Control Centers
Distribution Assemblies Department, General Electric Co Plainville

Motor—Generator Sets
Electric Specialty Co Stamford

Motors—Electric Timing
Cramer Controls Corporation The Centerbrook

Motors—Synchronous
Cramer Controls Corporation The Centerbrook
Electric Specialty Co Stamford

Moulded Plastic Products
Butterfield Inc T F Naugatuck
Patent Button Co The Waterbury
Scott & Sons Mfg Co Geo S Wallingford
Waterbury Companies Inc Waterbury
Watertown Mfg Co The Watertown

Mouldings
Himmel Brothers Co The (architectural, metal and store front) Hamden

Moulds
ABA Tool & Die Co Manchester
Hoggston & Pettis Mfg Co The (steel) New Haven

Name Plates
Cooney Engraving Co Branford
Seton Name Plate Co (metal & plastic name plates and identification tags) New Haven

Napper Clothing
Standard Card Clothing Co The (for textile mills) Stafford Springs

Nettings
Wilcox Lace Corp The Middletown

Newspaper Mats
Lockwood Sons Inc Wm H Hartford

Nickel Anodes
Apothecaries Hall Company Division
The Hubbard Hall Chemical Company Waterbury

Nickel Silver
American Brass Company The Waterbury
Bridgeport Brass Company Bridgeport
Plume & Atwood Mfg Co The Thomaston
Seymour Mfg Co The Seymour
Waterbury Rolling Mills Inc (sheets, strips, rolls) Waterbury
Western Brass Mills Div Olin Mathieson Chemical Corp (sheet, strip) New Haven

Nickel Silver Ingot
Whipple and Choate Company The Bridgeport

Night Latches
Sargent & Company New Haven
Yale & Towne Mfg Co Inc Stamford

Non-ferrous Metal Castings
Miller Company The Meriden

Nuts, Bolts and Washers
Clark Brothers Bolt Co Milldale
Hartford Machine Screw Co Div of Standard Screw Co Hartford

Office Equipment
Pitney-Bowes Inc Stamford
Underwood Corporation Bridgeport & Hartford
Wassell Organization Inc Westport

Office Printing
Kellogg & Bulkeley A Division of Connecticut Printers Inc Hartford

Oil Burners
Miller Company The (domestic) Meriden
Peabody Engineering Corp (Mechanical and/or Steam Atomizer) Stamford
Silent Gow Oil Burner Corp The Hartford

Oil Tanks
Norwalk Tank Co The (550 to 30M gals, underwriters above and under ground) South Norwalk
Whitlock Manufacturing Co The Hartford

Oils—Cutting
Anderson Oil and Chemical Company, Inc. Portland

Open Knife Switches and Accessories
Circuit Protective Devices Dept., General Electric Co. Plainville

Optical Cores & Ingots
Plume & Atwood Mfg Co The Thomaston

Otis Woven Awning Stripes
The Falls Company Norwich

Ovens—Electric
Bauer & Company Inc Hartford

Packaging-Engineering
Commerce Packaging Corp Stamford
National Export Corp. (Military and Commercial—equipped for domestic and export packaging, canning, crating and shipping) New Haven

Packaging & Packing
Commerce Packaging Corp Stamford
Mercer & Stewart Co The Hartford

Packing
Auburn Manufacturing Company The (leather, rubber, asbestos, fibre) Middletown
Raybestos Division of Raybestos-Manhattan Inc (Asbestos and Rubber Sheet) Bridgeport

Padlocks
Sargent & Company New Haven
Waterbury Lock & Specialty Co The Milford
Yale & Towne Mfg Co Inc Stamford

Pads—Office
The Baker Goodyear Company Branford

Paints
Tredennick Paint Manufacturing Co The Meriden

Paints and Enamels
Staminate Corp The New Haven

Panelboards—Lighting and Distribution
Distribution Assemblies Department, General Electric Co Plainville

Panelyte
Leed Co The H A Hamden

Panta
Moore Special Tool Co (crush wheel dresser) Bridgeport

Paperboard
Continental Can Co., Boxboard and Folding Carton Division Montville
Federal Paper Board Co Inc New Haven
New Haven Board & Carton Co The Montville, New Haven & Versailles
Robertson Paper Box Co Montville

Paper Boxes
Atlantic Carton Corp (folding) Norwich
National Folding Box Co Div Federal Paper Board Co Inc (folding) New Haven & Versailles
Mills Inc H J Bristol
New Haven Board & Carton Co The New Haven
Roberston Paper Box Co (folding) Montville

Paper Boxes—Folding and Setup
Bridgeport Paper Box Company Bridgeport
M Backers' Sons Inc Wallingford

Paper Clips
H C Cook Co The (steel) Ansonia

Paper Mill Machinery
Farrel-Birmingham Company Inc Ansonia

Paper Tubes and Cores
Sonoco Products Co (Climax-Lowell) Div Mystic

Parallel Tubes
Sonoco Products Co (Climax-Lowell) Div Mystic

Parking Meters
Rhodes Inc M H Hartford

Parts
Hartford Machine Screw Co Div of Standard Screw Co Hartford
Scovill Manufacturing Company (ammunition, electric instrument, electrical appliance, fountain pen, instrument, lighting fixture, ordance, etc.—blanked, stamped, formed, drawn, re-drawn, forged, screw machined, headed, pointed, finished) Waterbury

Pattern-Makers
Farel-Birmingham Company Inc Ansonia

Pattern Shop
Smith & Winchester Mfg Co The South Windham

Penlights
Bridgeport Metal Goods Mfg Co Bridgeport

Pet Furnishings
Andrew B Hendrix Co The New Haven

Phosphor Bronze
American Brass Company The Waterbury
Bridgeport Brass Company Bridgeport
Miller Company The (sheets, strips, rolls) Meriden
Seymour Mfg Co The Seymour
Waterbury Rolling Mills Inc (sheets, strips, rolls) Waterbury
Western Brass Mills Div Olin Mathieson Chemical Corp (sheets, strip) New Haven

Phosphor Bronze Ingots
Whipple and Choate Company The Bridgeport

Photo Engraving
Dowd Wyllie & Olson Inc Hartford
Wilcox Photo Engraving Co Inc New Haven

Photographic Equipment
Electrical Div Olin Mathieson Chemical Corp New Haven
Kalart Company Inc Plainville

Piano Repairs
Pratt Read & Co Inc (keys and action) Ivoryton

Piano Supplies
Pratt Read & Co (keys and actions, backs, plates) Ivoryton

Pins
CEM Company ("Spirol") Danielson
Hartford Machine Screw Co Div of Standard Screw Co Hartford

Pin Up Lamps
Verplex Company The Essex

Pipe
American Brass Co The (brass and copper) Waterbury
Bridgeport Brass Co (brass and copper) Bridgeport
Chase Brass & Copper Co (red brass and copper) Waterbury
Howard Co (cement well and chimney) New Haven

Pipe Fittings
Malleable Iron Fittings Co Branford

Pipe Plugs
Hartford Machine Screw Co Div of Standard Screw Co Hartford
Holo-Krome Screw Corporation The (countersunk) West Hartford

Pipe Plugs—Socketed
Hartford Machine Screw Co Div of Standard Screw Co Hartford
Holo-Krome Screw Corp The West Hartford

Pistols & Revolvers
Colt's Patent Fire Arms Mfg Co Inc Hartford

Plastic Bottles
Plax Corporation Bloomfield

Plastic Buttons
Frank Parizek Manufacturing Co The West Willington
Patent Button Co The Waterbury

Plastic Engraving
Salisbury Products Inc Lakeville

Plastic Extruders
Jessall Plastic Inc Kensington

Plastic Fabrication
Humphrey Fabricating Corporation Unionville
Salisbury Products Inc Lakeville

Plastic Film & Sheet Materials
Gilman Brothers Co The Gilman
Plax Corporation Bloomfield

Plastic Lining Equipment
Comco Inc Div of Enthone Inc New Haven

Plastic Machinery
Black Rock Mfg Company The Bridgeport

Plastic Molders
Plastic Molding Corporation Sandy Hook

Plastic Molding
Butterfield Inc T F Naugatuck
U S Plastic Molding Corporation Wallingford

Plastic Moulders
Conn Plastics Waterbury
Engineered Plastics, Inc. Watertown
Waterbury Companies Inc Waterbury
Watertown Mfg Co The Watertown

Plastic Pipe and Fittings
Comco Inc Div of Enthone Inc New Haven

Plastic Printing Plates
Lockwood Sons Inc Wm H Hartford

Plastic Wire Coating Materials
Electronic Rubber Co Stamford

Plastics
Naugatuck Chemical Division United States Rubber Co Naugatuck
(Advt.)

Plastics Machinery
Farrel-Birmingham Company Inc — Ansonia

Plastics—Moulds & Dies
Crown Tool & Die Co Inc — Bridgeport

Plasticrete Bloc
Plasticrete Corp — Hamden

Platers
Christie Plating Co — Groton
Patent Button Co The — Waterbury
Water Plating Company — Waterbury
Chromium Process Company The (Chromium Plating only) — Shelton

Platers' Equipment
Apothecaries Hall Company — Waterbury
Comco Inc Div of Enthone Inc — New Haven
Lea Manufacturing Co The — Waterbury
MacDermid Incorporated — Waterbury

Platers Metal
Plume & Atwood Mfg Co The — Thomaston

Plating
Christie Plating Co The (including lead plating) — Groton
Giering Metal Finishing Inc — Hamden
Superior Plating Co — Bridgeport
Tec-Plate Inc — Windsor Locks

Plating Processes and Supplies
Enthone Inc — New Haven
State Testing Laboratory Inc (plating analyses) — Bridgeport

Plumbers' Brass Goods
Bridgeport Brass Co — Bridgeport
Keeney Mfg Co The (special bends) — Newington
McGuire Mfg. Co. — Waterbury
Scovill Manufacturing Company — Waterbury

Plumbing Specialties
Risdon Manufacturing Co John M Russell Div — Naugatuck

Pole Line Hardware
Malleable Iron Fittings Co — Branford

Police Equipment
The Smith-Worthington Saddery Co — Hartford

Polishing
C & E Metal Finishing Co — Hartford
Mirror Polishing & Buffing Co — Waterbury

Postage Meters
Pitney Bowes Inc — Stamford

Potentiometers—Electronic
Bristol Company The — Waterbury

Precision Machine Tool Spindles
Whitnon Manufacturing Co (for milling, grinding, boring & drilling) — Farmington

Precision Manufacturing
Hartford Machine Screw Co Div of Standard Screw Co — Hartford

Precision Revolving Machinery
Whiton Manufacturing Co — Farmington

Precision Sheet Metal Fabrication
Milford Fabricating Co — Milford

Precision Springs & Wire Forms
Rowley Spring Co Inc The — Bristol

Premium Specialties
Waterbury Companies Inc — Waterbury

Preservatives—Wood, Rope, Fabric
Darworth Incorporated ("Cuprinol") ("Cellu-san") — Simsbury

Pressboard
Case & Risley Press Paper Co (genuine) — Oneco

Press Papers
Case Brothers Inc — Manchester

Presses
Farrel-Birmingham Company Inc (Hydraulic) — Ansonia

Presses—Power
Pneumatic Applications Co The (modernization of presses through conversion to Wichita Air Clutch operation) — Simsbury
Waterbury Farrel Foundry & Machine Co The — Waterbury

Pressure Vessels
Norwalk Tank Co Inc The (unfired to ASME Code Par U 69-70) — South Norwalk
Whitlock Manufacturing Co The — Hartford

Printing
Allied Printing Service Inc — Manchester
Bussmann Press Inc — New Haven
Case Lockwood & Brainard A Division of Connecticut Printers Inc — Hartford
Finlay Brothers — Hartford
Heminway Corporation The — Waterbury
Hildreth Press — Bristol
Hunter Press — Hartford
Lehman Brothers Inc — New Haven
Taylor & Greenough Co The — Wethersfield
T B Simonds Inc — Hartford
A D Steinbach & Sons — New Haven
The Walker-Rackliff Company — New Haven

Printing Machinery
Banthin Engineering Co (automatic) — Bridgeport

Printing Plates
Lockwood Sons Inc Wm H — Hartford

Printing Rollers
Chambers-Storck Company Inc The (engraved) — Norwich

Printing—Silk Screen
Ad-Craft Displays, Inc. — Bloomfield

Production Control Equipment
Ripley Company Inc — Middletown
Wassell Organization Inc — Westport

Profilers
Pratt & Whitney Co Inc — West Hartford

Propellers—Aircraft
Hamilton Standard Div United Aircraft Corp (propellers and other aircraft equipment) — Windsor Locks

Protective Coatings
Harrison Company The A S (Waxes) — South Norwalk

Publishers
O'Toole & Sons Inc The — Stamford

Pumps
Sumo Pumps Inc (Deep-well electro-submersible) — Stamford
Yale & Towne Mfg Co The — Stamford

Pumps—Small Industrial
Eastern Industries Inc — New Haven

Punches
Hoggson & Pettis Mfg Co The (ticket & cloth) — New Haven

Putty Softeners—Electrical
Fletcher Terry Co The — Forestville

Pyrometers
Bristol Co The (recording and controlling) — Waterbury

Radiation—Finned Copper
Bush Manufacturing Co — West Hartford
G & O Manufacturing Company The — New Haven
Vulcan Radiator Co The (steel and copper) — Hartford

Radiators—Engine Cooling
G & O Manufacturing Co — New Haven

Ratchet Offset Screw Driver
Chapman Co J W — Durham

Rayon Staple Fiber
Hartford Rayon Corp The — Rocky Hill

Reamers
Atrax Company The (solid carbide) — Newington
Pratt & Whitney Co Inc (All types) — West Hartford

Record Equipment
Wassell Organization Inc (filing equipment) — Westport

Recorders
Bristol Co The (automatic controllers, temperature, pressure, flow, humidity) — Waterbury

Reduction Gears
Farrel-Birmingham Company Inc — Ansonia
Snow-Nabstedt Gear Corp The — New Haven

Refractories
Howard Company — New Haven
Mullite Works Refractories Div H K Porter Co Inc — Shelton

Refrigeration
Dunham-Bush Inc — West Hartford

Research & Development
Raymond Engineering Laboratories (Electro-Mechanical) — Middletown
State Testing Laboratory Inc (chemical/physical testing) — Bridgeport

Resistance Wire
C O Jeliff Mfg Co The (nickel chromium, copper nickel, iron chromium, aluminum) — Southport
Kanathal Corporation The — Stamford

Respirators
American Optical Company Safety Products Division — Putnam

Retainers
Hartford Steel Ball Co The (bicycle & automotive) — Hartford

Rigid Plastic Sheet Material
Gilman Brothers Company The — Gilman

Riveting Machines
Grant Mfg & Machine Co The — Bridgeport
Linley Brothers Company — Bridgeport
Ripley Company Inc — Middletown
H P Townsend Manufacturing Co The — Elmwood

Rivets
Clark Brothers Bolt Co — Milldale
Plume & Atwood Mfg Co The — Thomaston
Raybestos Div of Raybestos-Manhattan Inc The (brass and aluminum tubular and solid copper) — Bridgeport
Raybestos Div of Raybestos-Manhattan Inc The (iron) — Bridgeport

Rods
American Brass Company The (copper, brass, bronze) — Waterbury
Bridgeport Brass Company — Bridgeport
Bristol Brass Corp The (brass and bronze) — Bristol
Scovill Manufacturing Company (aluminum, brass, bronze, etc.) — Waterbury

Rollers—Bituminous Paving
Gabb Special Products Div E Horton & Son Company — Windsor Locks

Roller Skate Wheels
Raybestos Division of Raybestos-Manhattan Inc — Bridgeport

Roller Skates
Arms and Ammunition Div Olin Mathieson Chemical Corp — New Haven

Rolling Mills & Equipment
Farrel-Birmingham Company Inc — Ansonia
Fenn Mfg Co The — Newington
Precision Methods & Machines Inc — Waterbury
Waterbury Farrel Foundry & Machine Co The — Waterbury

Rolls
Farrel-Birmingham Company Inc (Chilled and Alloy Iron, Steel) — Ansonia

Rotary Files
Atrax Company The (carbide) — Newington

Routers
Atrax Company The (solid carbide) — Newington

Rubber Cutting Machinery
Black Rock Mfg Company The — Bridgeport

Rubber Chemicals
Naugatuck Chemical Division United States Rubber Co — Naugatuck
Stamford Rubber Supply Co The ("Factice" Vulcanized Vegetable Oils) — Stamford

Rubberized Fabrics
Duro-Gloss Rubber Co The — New Haven

Rubber Footwear
Goodyear Rubber Co The — Middletown

Rubber Gloves
Seamless Rubber Company The — New Haven

Rubber—Handmade Specialties
Seamless Rubber Company The — New Haven

Rubber Latex Compounds and Dispersions
Naugatuck Chemical Division United States Rubber Co (coating, impregnating and adhesive compounds) — Naugatuck

(Advt.)

IT'S MADE IN CONNECTICUT

Rubber Mill Machinery
Farrel-Birmingham Company Inc — Ansonia

Rubber—Molded Specialties
Airex Rubber Prod Corp — Portland
Bond Rubber Corporation — Derby
Seamless Rubber Company The — New Haven

Rubber Products
Airex Rubber Prod Corp — Portland

Rubber Printing Plates
ADS Inc Div CSW Plastic Types Inc — Hartford
Lockwood Sons Inc Wm H — Hartford

Rubber Products—Mechanical
American Felt Co — Glenville
Auburn Manufacturing Company The (washers, gaskets, molded parts) — Middletown
Seamless Rubber Company The — New Haven

Rubber—Reclaimed
Naugatuck Chemical Division United States Rubber Co — Naugatuck

Rubbers
Naugatuck Chemical Div U S Rubber Co (synthetic rubbers and latex) — Naugatuck

Rubbish Burners
John P Smith Co The — New Haven

Rust Preventives
Anderson Oil and Chemical Company, Inc — Portland
Enthone Inc — New Haven

Rust Removers
Enthone Inc — New Haven

Saddlery
The Smith-Worthington Saddlery Co — Hartford

Safety Belts
Russell Mfg Co — Middletown

Safety Clothing
American Optical Company Safety Products Division — Putnam

Safety Fuses
Ensign-Bickford Co The (mining & detonating) — Simsbury

Safety Gloves and Mittens
American Optical Company Safety Products Division — Putnam

Safety Goggles
American Optical Company Safety Products Division — Putnam

Safety Switches
Circuit Protective Devices Dept, General Electric Co — Plainville

Saw Blades—Hack
Capewell Mfg Co The — Hartford
Thompson & Son Co The Henry G — New Haven

Saw Blades—Hack & Band
Capewell Manufacturing Company — Hartford

Saws, Band, Metal Cutting
Atlantic Saw Mfg Co — New Haven
Capewell Manufacturing Co The — Hartford
Thompson & Son Co The Henry G — New Haven

Saws—Hole
Capewell Manufacturing Co The — Hartford
Thompson & Son Co The Henry G — New Haven

Scissors
Acme Shear Company The — Bridgeport

Screens
Hartford Wire Works Co The (Windows, Doors and Porches) — Hartford

Screw Caps
Weimann Bros Mfg Co The (small for bottles) — Derby

Screw Machines
H P Townsend Mfg Company The — Elmwood

Screw Machine Products
Accurate Screw Products Inc (B & S Swiss & Davenports) — Southington
Apex Tool Co Inc The — Bridgeport
Auto Electric Screw Machine Co Inc — Bridgeport
Brown Manufacturing Co (up to 1½" capacity) — New Britain
Consolidated Industries — West Cheshire
Eastern Machine Screw Corp The — New Haven
Fairchild Screw Products Inc — Winsted
Franklin Screw Machine Co The (up to 1½" capacity) — Hartford
Garthwait Mfg Co A E (up to and incl ½") — Greist Mfg Co The (up to 1½" capacity) — New Haven
Hartford Machine Screw Co Div of Standard Screw Co (up to 5" capacity) — Hartford
Horberg Grinding Industries Inc (heat treated and ground type only) — Bridgeport

Screw Machine Products (Cont.)
Stanley Humanson Inc — Forestville
Independent Screw Machine Products (up to and incl 1¼" capacity) — Hartford
Junior Screw Machine Products Inc — West Haven
Lowe Mfg Co The — Wethersfield
Main Screw Machine Products (davenport & automatics exclusively) — Waterbury
National Automatic Products Company The — Berlin
Nelson's Screw Machine Products — Plantsville
New Britain Machine Company The — New Britain
New Haven Screw Machine Prods Inc (up to 1½" capacity) — Milford
Newton Screw Machine Products Co — Plainville
Olson Brothers Company (up to ¾" capacity) — Plainville
Olson & Sons R P — Southington
Plume & Atwood Mfg Co The — Thomaston
Scovill Manufacturing Company — Waterbury
United Screw Machine Co — Thomaston
Waterbury Machine Tools & Products Co (Brown & Sharpe and Davenport) — Waterbury

Screw Machine Tools
American Cam Company Inc (Circular Form Tools) — Hartford
Pratt & Whitney Co Inc Reamers, Taps, Dies, Blades and Knurls) — West Hartford
Somma Tool Co (precision circular form tools) — Waterbury

Screws
Allen Manufacturing Company The — Hartford
American Screw Company — Willimantic
Atlantic Screw Works (wood) — Hartford
Bristol Company The (socket set and socket cap screws) — Waterbury
Clark Brothers Bolt Co — Milldale
Hartford Machine Screw Co Div of Standard Screw Co — Hartford
Holo-Krome Screw Corporation The (socket set and socket cap) — West Hartford
Scovill Manufacturing Company — Waterbury
Superior Manufacturing Co The — Winsted

Screws—Socket
Allen Manufacturing Company The — Hartford
Bristol Co The — Waterbury
Hartford Machine Screw Co Div of Standard Screw Co — Hartford
Holo-Krome Screw Corp The — West Hartford

Sealing Tape Machines
Better Packages Inc ("Counterboy," "Tape-shooter," "Big Inch") — Shelton
Derby Sealers Inc (gummed and pressure-sensitive tapes) — Derby

Seals
Russell Mfg Co (for oven doors and fire bulkheads) — Middletown

Service Entrance Equipment
Circuit Protective Devices Dept., General Electric Co — Plainville

Sewing Machines
Greist Mfg Co The (Sewing Machine attachments) — New Haven
Singer Manufacturing Company The (industrial) — Bridgeport

Sharpeners
Gorn Electric Co Inc (electric knife and scissors) — Stamford

Shaving Soaps
J B Williams Co The — Glastonbury

Shears
Acme Shear Co The (household) — Bridgeport

Sheet Metal Products
American Brass Co The (brass and copper) — Waterbury
Merriam Mfg Co (security boxes, fitted tool boxes, tackle boxes, displays) — Durham
Parsons Co Inc W A (fabricators) — Durham
Plume & Atwood Mfg Co The — Thomaston
United Manufacturing Co Division of the W L Maxson Corp — Hamden

Sheet Metal Stampings
American Brass Company The — Waterbury
American Buckle Co The — West Haven
DooVal Tool & Mfg Inc The — Naugatuck
J H Sessions & Son — Bristol
Plume & Atwood Mfg Co The — Thomaston
Scovill Manufacturing Company (aluminum, brass, bronze, copper, nickel silver, steel and other metals and alloys) — Waterbury

Sheet Steel
Dolan Steel Company Inc — Bridgeport

Shell Cores
Victors Brass Foundry Inc — Guilford

Shell Molding
Victors Brass Foundry Inc — Guilford

Shells
Scovill Manufacturing Company (aluminum, brass, bronze, copper, nickel silver—drawn, stamped—electric socket, screw) — Waterbury
Wolcott Tool and Manufacturing Company Inc — Waterbury

Showcase Lighting Equipment
Wiremold Company The — Hartford

Signals
H C Cook Co The (for card files) — Ansonia

Signs
Berger Sign Co (neon electric-porcelain enamel-stainless steel) — Hartford
Ad-Craft Displays, Inc. (all types, quantity only) — Bloomfield

Silk Screen Process Printing
Ad-Craft Displays Inc — Bloomfield
Norton Co R H — New Haven
Sirocco Screen prints — New Haven
Stifel & Kufta Inc — New Britain

Silk Screening on Metal
Ad-Craft Displays Inc — Bloomfield
Merriam Mfg Co (Displays and Specialties, to order) — Durham

Simulators
Reflectone Corporation The — Stamford

Sintered Metal Products
American Sinterings Div of Engineered Plastics Inc (Powder Metal Parts) — Watertown
Raybestos Division of Raybestos-Manhattan Inc — Bridgeport

Sizing and Finishing Compounds
American Cyanamid Company — Waterbury

Slide Fasteners
G E Prentice Mfg Co The — Kensington
North & Judd Manufacturing Co — New Britain
Scovill Manufacturing Company (GRIPPER zippers) — Waterbury

Smoke Stacks
Bigelow Company The (steel) — New Haven
Norwalk Tank Co The — South Norwalk

Snap Fasteners
Scovill Manufacturing Company (GRIPPER snap fasteners) — Waterbury

Soap
J B Williams Co The (industrial soaps, toilet soaps, shaving soaps) — Glastonbury

Special Machinery
Banthin Engineering Company (complete and/or parts) — Bridgeport
Black Rock Mfg Company The — Bridgeport
Boesch Mfg Co Inc — Danbury
Farrel-Birmingham Company Inc — Ansonia
Federal Machine & Tool Co — Bristol
Fenn Mfg Co The — Newington
Hartford Special Machinery Co The — Hartford
H P Townsend Mfg Company The — Elmwood
National Sheradizing & Machine Co (mandrels & stock shells for rubber industry) — Hartford
Swan Tool & Machine Co The — Hartford
Tucker Machine Co — New Haven

Special Parts
Fenn Mfg Co The — Newington
Greist Mfg Co The (small machines, especially precision stampings) — New Haven
J H Sessions & Son — Bristol

Spinnings
Gray Manufacturing Company The — Hartford

Spline Milling Machines
Townsend Mfg Co The H P — Elmwood

Spotwelding
Spotwelders Inc (aluminum, steel, magnesium, titanium & alloys) — Stratford

Spray Painting Equipment and Supplies
Lea Manufacturing Co The — Waterbury

Spring Coiling Machines
Torrington Manufacturing Co The — Torrington

Spring Presses
Townsend Mfg Co The H P — Elmwood

Spring Units
Owen Silent Spring Division American Chain & Cable Company Inc — Bridgeport

Spring Washers
Barnes Co The Wallace Div Associated Spring Corp — Bristol

Springs
Central Spring Co (Torsion and Double Torsion) — Terryville

Springs—Coil & Flat
Barnes Co The Wallace Div Associated Spring Corp — Bristol
Barrett Co William L — Bristol
Bristol Spring Manufacturing Co — Plainville
Foursome Manufacturing Co — Bristol
Stanley Humason Inc — Forestville
Newcomb Spring Corp The — Southington
New England Spring Manufacturing Company — Unionville
Peck Spring Co The — Plainville

Springs—Flat
Atlantic Precision Spring Co — Forestville
Barnes Co The Wallace Div Associated Spring Corp — Bristol
Bristol Spring Manufacturing Co — Plainville
Foursome Manufacturing Co — Bristol
Stanley Humason Inc — Forestville
Peck Spring Co — Plainville

(Advt.)

Springs—Wire
Banner Spring Corporation Hartford
Barnes Co The Wallace Div Associated Spring Corp Bristol
Bernston Co J W Plainville
Bristol Spring Manufacturing Co Plainville
Colonial Spring Corporation The Hartford
Connecticut Spring Corporation The (compression, extension, torsion) Hartford
Foursome Manufacturing Co Bristol
Stanley Humason Inc Forestville
D R Templeman Co (coil and torsion) Plainville
Newcomb Spring Corp The Southington
Peck Spring Co Plainville

Springs, Wire & Flat
Peck Spring Co Plainville

Sprinklers
Scovill Manufacturing Company (GREEN SPOT) Waterbury

Stamped Metal Products
American Brass Company The Waterbury

Stampings
DooVal Tool & Mfg Inc The Naugatuck
Foursome Manufacturing Co Bristol
Plume & Atwood Mfg Co The (small) Thomaston
Scovill Manufacturing Company (aluminum, brass, bronze, copper, nickel silver, steel and other metals and alloys—automotive, electrical, radio, etc.—deep drawn, enameled) Waterbury
Stanley Pressed Metal New Britain

Stampings—Small
Acme Shear Co The Bridgeport
Barnes Co The Wallace Div Associated Spring Corp Bristol
Barret Co William L Bristol
Bristol Spring Manufacturing Co Plainville
Greist Manufacturing Co The New Haven
Stanley Humason Inc Forestville
Wire Form Inc Milldale

Stamps
Hoggson & Pettis Mfg Co The (steel) New Haven
Parker-Hartford Corporation (steel) Hartford

Stationery Specialties
American Brass Company The Waterbury

Steel Castings
Hartford Electric Steel Corp The (carbon, low alloy and stainless steel castings) Hartford
Malleable Iron Fittings Co Branford
Nutmeg Crucible Steel Co Branford

Steel—Cold Rolled Spring
Barnes Co The Wallace Div Associated Spring Corp Bristol
Detroit Steel Corporation Hamden

Steel—Cold Rolled Stainless
Ulbrich Stainless Steels Wallingford
Wallingford Steel Company Wallingford

Steel—Cold Rolled Strip
Detroit Steel Corporation Hamden
Stanley Works The New Britain

Steel—Cold Rolled Strip and Sheets
Detroit Steel Corporation New Haven
Wallingford Steel Company Wallingford

Steel Goods
Merriam Mfg Co (sheets products to order) Durham

Steel—Ground Flat Stock
Thompson & Son Co The Henry G New Haven

Steel Rolling Rules
Waterbury Lock & Specialty Co The Milford

Steel Stamps
Cooney Engraving Co Branford

Steel Strapping
Stanley Works The New Britain

Stereotypes
New Haven Electrotype Div Electrographic Corp New Haven

Stop Clocks, Electric
H C Thompson Clock Co the Bristol

Storage Batteries
R A E Storage Battery Mfg Co Glastonbury

Straps, Leather
Auburn Manufacturing Company The (textile, industrial, skate, carriage) Middletown

Strip Steel
Dolan Steel Company Inc Bridgeport

Structural Mouldings
Leed Co The H A Hamden

Studio Couches
Waterbury Mattress Co Waterbury

Super Refractories
Mullite Works Refractories Div H K Porter Co Inc Shelton

Surface Metal Raceway & Fittings
Wiremold Company The Hartford

Surgical Dressings
Acme Cotton Products Co Inc East Killingly
Seamless Rubber Company The New Haven

Surgical Rubber Goods
Seamless Rubber Company The New Haven

Swaging Machinery
Fenn Mfg Co The Newington

Switchboards
Distribution Assemblies Department, General Electric Co Plainville

Switchboards Wire and Cables
Rockbestos Products Corp (asbestos insulated) New Haven

Switches—Electric
General Electric Company Bridgeport

Synthetic Fabrics
American Felt Co Glenville

Tabulating Equipment—Manual
Denominator Company Inc Woodbury
Veeder-Root Incorporated Hartford

Tanks
Acme Welding Div United Tool & Die Co West Hartford
Bigelow Company The (steel) New Haven
Comco Inc Div of Enthone Inc (steel, alloy and lined) New Haven
Connecticut Welders Inc (steel, alloy & lined) Wallingford
King Co Alfred B (steel, alloy and lined) North Haven
Norwalk Tank Co The South Norwalk
Rolock Inc (Alloy) Fairfield
Storts Welding Company (steel and alloy) Meriden

Tanks—Stainless Steel
Alsop Engineering Corporation Milldale

Tap Extractors
Walton Company The West Hartford

Tape
Russell Mfg Co (Glass Electrical Insulating Tapes, Glass Fabrics for Plastic Moulding) Middletown

Tapes—Industrial Pressure Sensitive
Seamless Rubber Company The New Haven

Tape Machines
Better Packages Inc (Manual and electric models for case taping) Shelton
Derby Sealers Inc (manual and electric models) Derby

Taps
Hanson-Whitney Company The Hartford
Pratt & Whitney Co Inc West Hartford

Tarred Lines
Brownell & Co Inc Moodus

Telemetering Instruments
Bristol Co The Waterbury

Television—Radio
Junior Screw Machine Products Inc West Haven

Testers—Insulation
McNeal J D New Haven

Testers—Insulation Wire & Cable
Davis Electric Company Wallingford

Testers—Nondestructive, Ultrasonic
Sperry Products Inc Danbury

Testing
State Testing Laboratory Inc (environmental, X-ray, tensile, bearings) Bridgeport

Textile Printing Gums
Polymer Industries Inc Springdale

Textile Processors
Amerbelle Corporation Rockville

Thermometers
Bristol Co The (recording and automatic control) Waterbury
Manning Maxwell & Moore Inc Stratford

Thin Gauge Metals
Plume & Atwood Mfg Co The Thomaston
Thinsheet Metals Co The (plain or tinned in rolls) Waterbury

Thread
American Thread Co The Willimantic
Belding Heminway Corticelli Putnam
Max Pollack & Co Inc Groton and Willimantic

Thread Chasers
Geometric Tool Division, Greenfield Tap & Die Corp New Haven

Thread Gages
Hanson-Whitney Company The Hartford
Pratt & Whitney Co Inc West Hartford

Thread Milling Machines
Hanson-Whitney Company The Hartford
Pratt & Whitney Co Inc West Hartford

Thread Rolling
Bland Burner Co The Thread Products Div Hartford

Thread Rolling Machinery
Hartford Special Machinery Co The Hartford
Mettler Machine Tool Inc New Haven

Threading Machines
Grant Mfg & Machine Co The (double end automatic) Bridgeport

Timers, Interval
A W Haydon Co The Waterbury
H C Thompson Clock Co The Bristol
Cramer Controls Corporation The Centerbrook
Rhodes Inc M H Hartford

Timing Devices
B & N Tool & Engineering Co (development and model work) Thomaston
Cramer Controls Corporation The Centebrook
A W Haydon Co The Waterbury
Lux Clock Manufacturing Company Waterbury
Rhodes Inc MH Hartford
Seth Thomas Clocks Thomaston
United States Time Corporation The Waterbury

Timing Devices & Time Switches
A W Haydon Co The Waterbury
Lux Clock Manufacturing Company Waterbury
M H Rhodes Inc Hartford

Tinning
Thinsheet Metals Co The (non-ferrous metals in rolls) Waterbury
Wilcox-Crittenden Div North & Judd Mfg Co Middletown

Tires
Armstrong Rubber Company The West Haven

Tokens
Scovill Manufacturing Company (bus, street car and subway fare) Waterbury

Tool Bits
Thompson & Son Co The Henry G New Haven

Tool Chests
Vanderman Manufacturing Co The Willimantic

Tool Hardening
Commercial Metal Treating Co Bridgeport

Tools
B & N Tool & Engineering Co (dies, jigs, fixtures, sub-press and progressive) Thomaston
Hoggson & Pettis Mfg Co The (rubber workers) 141 Brewery St New Haven

Tools & Dies
Metropolitan Tool & Die Hartford
Moore Special Tool Co Bridgeport
Swan Tool & Machine Co The Hartford

Tools, Dies & Fixtures
Greist Mfg Co The New Haven

Tools, Dies, Jigs & Fixtures
Lyons Tool & Die (modelwork, jig boring) Meriden
Otterbein Co J A Middletown
Telke Tool & Die Mfg Co New Britain

Tools, Fixtures, Gauges
Fredericks Tool Co J F West Hartford

Toroidal Winding Machines
Boesch Mfg Co Inc Danbury

Totalizers
Reflectone Corporation The Stamford

Toys
Geo S Scott Mfg Co The Wallingford
Gilbert Co The A C New Haven
N N Hill Brass Co The East Hampton
Waterbury Companies Inc Waterbury

Transformers
Monarch Electric Co (Allis Chalmers) New Britain

Trucks—Commercial
Metropolitan Body Company (International Harvester Truck chassis and "Metro" bodies) Bridgeport

Truck—Lift
Excelsior Hardware Co The Stamford

Trucks—Skid Platforms
Excelsior Hardware Co The (lift) Stamford

Tube Clips
H C Cook Co The (for collapsible tubes) 32 Beaver St Ansonia
Weimann Bros Mfg Co The (for collapsible tubes) Derby

Tube Fittings
Scovill Manufacturing Company (UNIFLARE flared tube and LOXIT compression tube) Waterbury

Tubers
Standard Machinery and Davis-Standard Divisions of Franklin Research Corp Mystic (Advt.)

Tubes—Collapsible Metal
Sheffield Tube Corp The — New London

Tubing
American Brass Co The (brass and copper) — Waterbury
Bridgeport Brass Company (brass and copper) — Bridgeport
G & O Manufacturing Co (finned) — New Haven
Scovill Manufacturing Company (Brass and Copper) — Waterbury
Wallingford Steel Co The (stainless and super metals) — Wallingford

Tubing—Flexible Metallic
American Brass Co Metal Hose Branch — Waterbury

Tubing—Heat Exchanger
American Brass Company The — Waterbury
Scovill Manufacturing Company — Waterbury

Tumbling Barrels and Accessories
Wheeler Co G E — New Haven

Tumbling Equipment and Supplies
Esbec Barrel Finishing Corp — Byram

Tumbling Service
Esbec Barrel Finishing Corp — Meriden

Turntables
Macton Machinery Company Inc (industrial & display) — Stamford

Typewriters
Royal McBee Corp — Hartford
Underwood Corporation — Hartford

Typewriters—Portable
Royal McBee Corp — Hartford
Underwood Corporation — Hartford

Typewriter Ribbons and Supplies
Royal McBee Corp — Hartford
Underwood Corporation — Hartford and Bridgeport

Ultrasonic Processing Equipment
General Ultrasonics Co The — Hartford

Underclearer Rolls
Sonoco Products Co (Climax-Lowell Div) — Mystic

V-Belt Drives
Monarch Electric Co (Allis Chalmers) — New Britain

Vacuum Bottles and Containers
American Thermos Products Co — Norwich

Vacuum Cleaners
Electrolux Corporation — Old Greenwich
Spencer Turbine Co The — Hartford

Valves—Automobile Tire
Bridgeport Brass Company — Bridgeport

Valves—Aircraft
Bridgeport Thermostat Div Robertshaw-Fulton Controls Co — Milford

Valves—Radiator Air
Bridgeport Brass Company — Bridgeport

Valves—Relief & Control
Beaton & Caldwell Mfg Co — New Britain

Valves—Safety & Relief
Manning Maxwell & Moore Inc — Stratford

Vanity Boxes
Bridgeport Metal Goods Mfg Co — Bridgeport
Plume & Atwood Manufacturing Co — Thomaston
Scovill Manufacturing Company — Waterbury

Varnishes
Staminite Corp The — New Haven

Velvets
American Velvet Co (owned and operated by A Wimpfheimer & Bros Inc) — Stonington
Leiss Velvet Mfg Co Inc The — Willimantic

Venetian Blinds
Findell Manufacturing Company — Manchester
Jennings Company The S Barry — New Haven

Ventilating Systems
Colonial Blower Company — Plainville

Vertical Shapers
Pratt & Whitney Co Inc — West Hartford

Vibrators—Pneumatic
Branford Co The (industrial) — New Haven

Vinyl Extrusion & Moulding Compounds
Electronic Rubber Co — Stamford

Vises
Fenn Manufacturing Company The (Quick-Action Vises) — Newington
Vanderman Manufacturing Co The (Combination Bench Pipe) — Willimantic

Wall Paper
Stamford Wall Paper Co Inc — Stamford

Washers
American Felt Co (felt) — Glenville
Auburn Manufacturing Company The (all materials) — Middletown
Clark Brothers Bolt Co — Milldale
Humphrey Fabricating Corp — Unionville
Plume & Atwood Mfg Co The (brass & copper) — Thomaston
J H Rosenbeck Inc — Torrington
Saling Manufacturer Company (made to order) — Unionville

Washers—Felt
American Felt Co — Glenville
Chas W House & Sons Inc (Mills & Cutting Plant) — Unionville

Watches
E Ingraham Co The — Bristol
United States Time Corporation The — Waterbury

Water Deionizers
Penfield Mfg Co — Meriden

Water Heaters
Whitlock Manufacturing Co The (instantaneous & storage) — Hartford

Water Heaters— Electric
Bauer & Company Inc — Hartford

Water Heaters—Gas or Kerosene
Holyoke Heater Corp of Conn Inc — Hartford

Waxes
Harrison Company The A S (and other protective coatings) — South Norwalk

Waxes—Floor
Fuller Brush Co The — Hartford

Webbing
Russell Mfg Co (Webbing for Safety Seat Belts—all types of webbing) — Middletown

Wedges
Saling Manufacturing Company (hammer & axe) — Unionville

Welded Products
Acme Welding Div United Tool & Die Co — West Hartford

Welding
Aircraft Welding & Mfg Co Inc (aluminum, stainless steel, magnesium) — Hartford
Connecticut Welders Inc (fabrication & repairs) — Wallingford
Farrel-Birmingham Company Inc — Ansonia
Industrial Welding Company (Equipment Manufacturers—Steel Fabricators) — Hartford
King Co Alfred B — North Haven

Welding—Lead
Connecticut Welders Inc (tanks & coils) — Wallingford
King Co Alfred B — North Haven
Storts Welding Company (tanks and fabrications) — Meriden

Welding Rods
American Brass Company The — Waterbury
Bridgeport Brass Company — Bridgeport
Bristol Brass Co The (brass & bronze) — Bristol

Wells
Church Co The Stephens B — Seymour

Wicks
American Felt Co — Glenville
Auburn Manufacturing Company The (felt, asbestos) — Middletown
Holyoke Heater Corp of Conn Inc — Hartford

Wiffle Ball
Wiffle Ball Inc The — New Haven

Window & Door Guards
Hartford Wire Works Co The — Hartford
Smith Co The John P — New Haven

Wire
American Brass Company The — Waterbury
Atlantic Wire Co The (steel) — Branford
Bartlett Hair Spring Wire Co The — North Haven
Bridgeport Brass Company (brass and silicon bronze) — Bridgeport
Bristol Brass Corp The (brass & bronze) — Bristol
Driscoll Wire Co The (steel) — Shelton
Hudson Wire Co Winsted Div (insulated & enameled magnet) — Winsted
Platt Bros & Co The (zinc wire) — Waterbury
Plume & Atwood Mfg Co The (brass, bronze, nickel silver) — Thomaston
Scovill Manufacturing Company (Brass, Bronze and Nickel Silver) — Waterbury

Wire and Cable
Continental Wire Corp (for industrial and military applications) — Wallingford
General Electric Company (for residential, commercial and industrial applications) — Bridgeport
Rockbestos Products Corporation (all asbestos, mining, shipboard and appliance applications) — New Haven

Wire Arches & Trellises
Hartford Wire Works Co The — Hartford
John P Smith Co The — New Haven

Wire Baskets
Wiretex Mfg Inc (Industrial, for acid, heat, treating and degreasing) — Bridgeport

Wire Cloth
Hartford Wire Works Co The — Hartford
C O Jeliff Mfg Co The (all metal, all meshes) — Southport
Pequot Wire Cloth Co Inc — Norwalk
Rolock Inc (Alloy) — Fairfield
Smith Co The John P — New Haven

Wire Dipping Baskets
Hartford Wire Works Co The — Hartford
John P Smith Co The — New Haven

Wire Drawing Dies
Waterbury Wire Die Co The — Waterbury

Wire Forming Machinery
Nilson Machine Company The A H — Shelton
Torrington Manufacturing Company The — Torrington

Wire Formings
G E Prentice Mfg Co The — Kensington
Master Engineering Company — West Cheshire
North & Judd Manufacturing Co — New Britain
Peck Spring Co — Plainville
Turner & Seymour Manufacturing Co The — Torrington
Verplex Company The — Essex

Wire Forms
Atlantic Precision Spring Co — Forestville
Banner Spring Corporation — Hartford
Barnes Co The Wallace Div Associated Spring Corp — Bristol
Bristol Spring Manufacturing Co — Plainville
Central Spring Co (short run orders) — Terryville
Colonial Spring Corporation The — Hartford
Connecticut Spring Corporation The — Hartford
Foursome Manufacturing Co — Bristol
Gemeo Manufacturing Co Inc — Southington
Stanley Humason Inc — Forestville
New England Spring Mfg Co — Unionville
Peck Spring Co — Plainville
Templeman Co D R — Plainville
Terryville Manufacturing Co — Terryville
Wire Form Inc — Milldale

Wire Goods
American Buckle Co The (overall trimmings) — West Haven
Patent Button Co The — Waterbury
Scovill Manufacturing Company (To Order) — Waterbury

Wire Partitions
Hartford Wire Works Co The — Hartford
John P Smith Co The — New Haven

Wire Products
Stanley Humason Inc — Forestville
Peck Spring Co — Plainville
Plume & Atwood Mfg Co The (to order) — Thomaston

Wire Reels
Mettler Machine Tool Inc — New Haven
Nilson Machine Company The A H — Shelton

Wire Rings
American Buckle Co The (pan handles and tinners' trimmings) — West Haven
Stanley Humason Inc — Forestville
Peck Spring Co — Plainville
Templeman Co D R — Plainville

Wire—Specialties
Andrew B Hendryx Co The — New Haven

Wire Straightening and Cutting Machinery
Mettler Machine Tool Inc — New Haven

Wiring Devices
Harvey Hubbell Inc — Bridgeport

Wood Scrapers
Fletcher-Terry Co The — Forestville

Woodwork
C H Dresser & Sons Inc (Mfg all kinds of woodwork) — Hartford
Hartford Builders Finish Co — Hartford

Woven Felts—Wool
Chas W House & Sons Inc (Mills & Cutting Plant) — Unionville

Yarns
Aldon Spinning Mills Corporation The (fine-woolen and specialty) — Talcottville
Ensign-Bickford Co The (jute-carpet) — Simsbury
Hartford Spinning Incorporated (Wollen, knitting and weaving yarns) — Unionville

Zinc
Platt Bros & Co The (ribbon, strip and wire) P O Box 1030 — Waterbury

Zinc Castings
Newton-New Haven Co Inc — West Haven

Zinc Die Castings
Mt Vernon Die Casting Corporation — Stamford (Advt.)

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Accounting Hints

(Continued from page 38)

follows: 1. Projected five-year special project list; 2. projected Income Statement for five years; 3. projected Capital Budget for five years.

The special project list is the spelling out of the major tasks which are anticipated and the responsibility for their accomplishment. It obviously cannot include all of the special projects which will come up during the next five years and cannot possibly spell out all of the detailed steps required.

The projected income account and capital budget are prepared from all of the dollar estimates and forecasts developed during the second stage.

These three schedules are in a sense the blueprint for going from where you are now to where you want to be five years hence. There is nothing sacred about them and they must be subject to vigilant follow-up, review, and, when needed, reappraisal and revision. This should be a constant process.

4. Implementing the Plan. The implementation of the plan from this point on should be a fairly straightforward matter. The long-range plan is broken down into specific steps planned for specific times. At this point, annual projects and budgets are tied in with the long-range plan. The projects and budget for any specific year include that part, or parts, of the long-range plan which it is intended to accomplish that year.

At this point, one of the major advantages of long-range planning becomes self-evident. The appraisal of individual projects and budgets can now be made against a longer range yardstick. The practice of budgeting a "continuation of last year's activities" obviously will fall by the wayside.

All of the above sounds like a lot of time-consuming, tedious work and to a certain extent it can be. It is already done to a greater or lesser extent and with more or less formality in most companies. The desirability of a more formal approach and the need for it in any particular company is obviously a matter of individual judgment. There do appear to be intrinsic benefits from this approach and many companies are already devoting much of the time that would be required to do it well to doing the same thing without the more formal approaches outlined. It is merely a question of channeling this activity constructively and pulling the individual pieces together into a complete blueprint.

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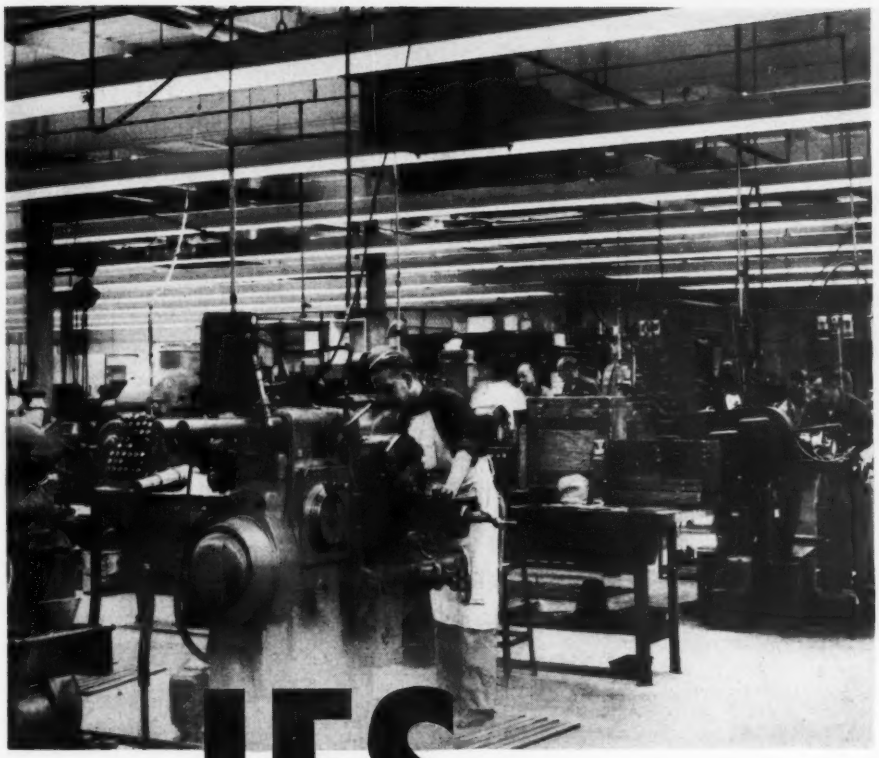

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